

SCHOOL MANAGEMENT

August 1960

Education Library

PRACTICAL SOLUTIONS TO SCHOOL MANAGEMENT PROBLEMS

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BE ELECTRICALLY HEATED?

How much
do you know
about
school law?



How much are we spending for

AUXILIARY
SERVICES?

The fifth report on

DO YOUR SCHOOLS HAVE
PAPERBACK BOOKSTORES?

SEE COMPLETE CONTENTS ON PAGE 3



Introducing the new
WEBSTER
UNIT VENTILATOR



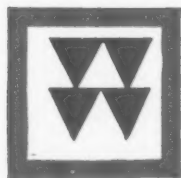
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Simply heating today's classroom is not enough. Adequate ventilation and cooling are equally vital in providing a comfortable environment in which to teach and learn. The new Webster Unit Ventilator meets all three requirements in a single unit designed especially for school installation. It *ventilates* as it heats or cools—assures gentle circulation of filtered air at the right temperature throughout the room. Room air and outdoor air are blended by a damper of exclusive design which assures proper ventilation and draft-free comfort. Each unit is completely self-contained. No expensive central system duct work is required. The Webster Unit Ventilator is engineered to be used with Webster "Tru-Perimeter" Walvector to provide a blanket of heat the length of every wall. Functionally styled storage units integrate Walvector and Unit Ventilator into a custom installation to complement every school interior. A fully illustrated brochure details performance and installation advantages possible only with the new Webster Unit Ventilator. Write for a copy today, or ask your Warren Webster man about the complete line of Webster System Products for Schools.



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SCHOOL MANAGEMENT

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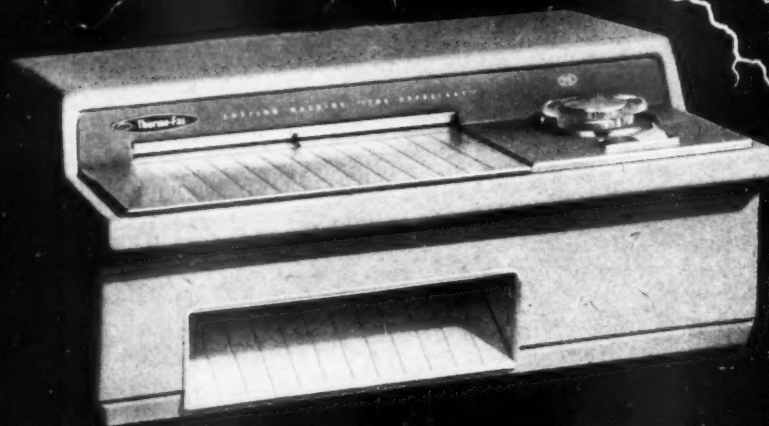
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SCHOOL MANAGEMENT

22 West Putnam Ave., Greenwich, Conn.

Volume 4

Number 8

Publisher
Jerome W. Harris

President
William S. Kline

EDITORIAL STAFF

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Feature Editor: Theodore C. Boytos
Departments Editor: Ralph M. Ferdinand
Art Director: Laurence Lustig
Production Manager: Virginia E. Ray
Art Production Manager: Joan A. Longnecker
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Ed. Research Consultant: Dr. Orlando F. Furno
Food Service Consultant: Richard Flambert

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Circulation: A. A. Novy, manager
Marie M. LaGuardia
Sales Promotion Mgr.: Frederick L. Bunting

Advertising Offices

New York 141 East 44th Street, MU 7-0583 Division Manager: Gil Hand-Joseph Hanson-Donald T. Lock

Chicago 612 North Michigan Avenue, Del 7-0112 Division Manager: William S. Hutchings-Bill Murray

Cleveland 55 Public Square, CH 1-2612 Division Manager: Alfred A. Spelbrink-Donald J. Elliott

Los Angeles The Robert W. Walker Co., 730 South Western Avenue, Dunkirk 7-4388

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Houston Ralph Runnels, 5210 Morningside Drive, Jackson 4 6633



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SCHOOL MANAGEMENT



CONVERTS 1 FLOOR INTO 5 FLOORS

The basketball floor with its mirror-like beauty, once jealously guarded and restricted in use, now can be put into full time use. How? Choose TROPHY! You get a 5-fold return on your investment in your Gym, when you take the one step of choosing TROPHY Gym Floor Finish. The toughness (highest abrasion resistance) and no-glare, non-slip beauty of this fine finish mean extra protection that enables you to use the floor for:

1. Basketball games and tournaments, (ideal for televising)
2. Physical education classes
3. Ballroom or square dances
4. Spectator seating during banquets,

plays, musicals, programs, lectures, etc.

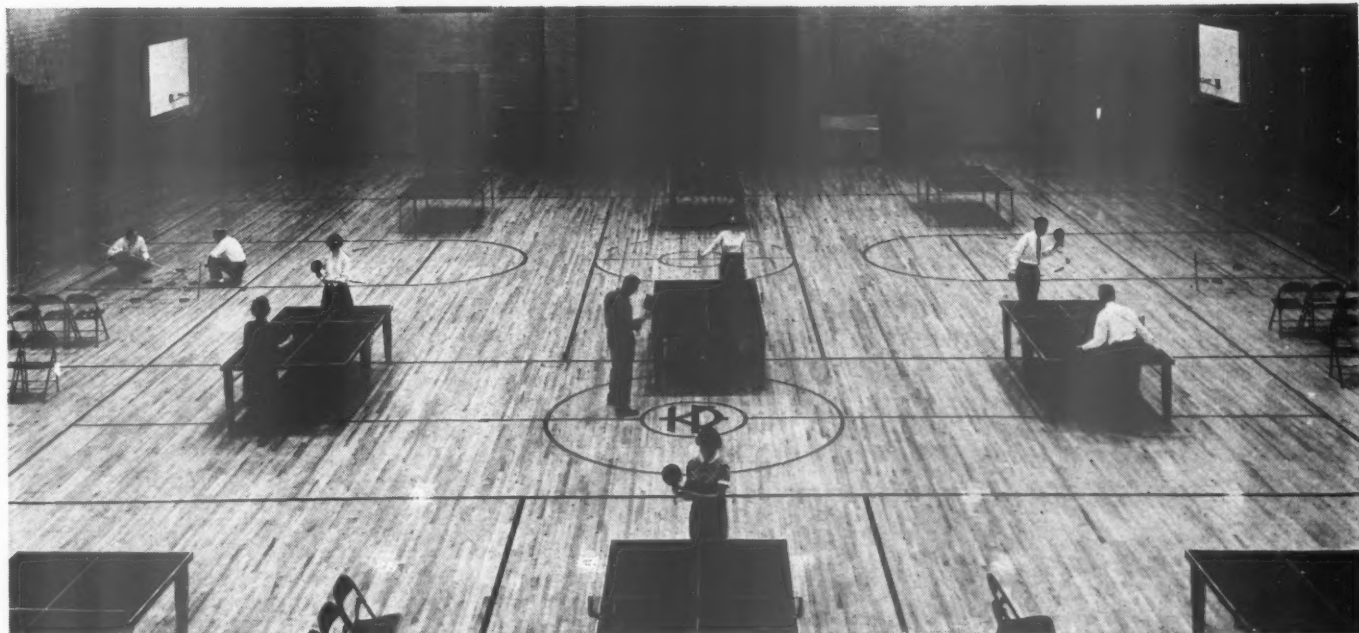
5. Popular indoor sports, such as Volley Ball, Shuffleboard, Table Tennis, etc. - Your Gym can become a Recreation and Community Center.



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Where ordinary finishes yellow, crack, break, check, scratch and peel and where seals offer little surface protection, Trophy holds on for "dear life" and affords a non-yellowing, tough, flexible film that defies scratching or breaking. You'll find more life in your Trophy floor when you work it to death!



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CITY..... STATE.....

(Circle number 719 for more information)

Will your new school open on time?

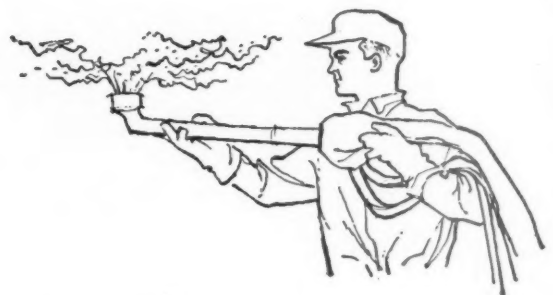
The Moraine Meadows School did—thanks to Armstrong Acoustical Fire Guard, the first time-design-rated acoustical tile. This tile also can save construction costs, provide Underwriters' Laboratories rated fire protection, and give a quieter atmosphere for study.

THERE ARE several reasons why Armstrong Acoustical Fire Guard already has been accepted by the nation's school officials, architects, and contractors.

One of them is that Acoustical Fire Guard has proved itself to be a genuine timesaver. Schools have opened from three to six weeks before deadline, thanks to Acoustical Fire Guard.

James Beale, general contractor for the Mor-

“But, with the substitution of Armstrong Acoustical Fire Guard, the carpenters were able to move right in behind the acoustical contrac-

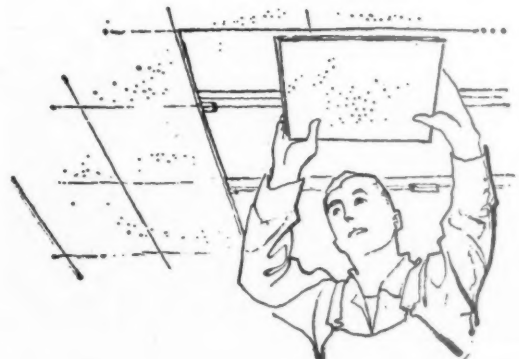


tor. We saved a good three weeks and met our deadline.”

Acoustical Fire Guard can save money, too—up to 30 cents a square foot, depending upon



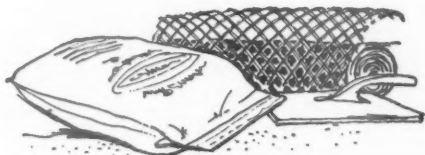
aine Meadows School near Dayton, Ohio, has this to say: “Acoustical Fire Guard got us out of a bad hole. We had a September 1 deadline on the school, and I saw by the first of August that we couldn't meet it with the ceiling that was specified. Too much moisture in the building. It would have delayed the millwork.





Without the substitution of Armstrong Acoustical Fire Guard for the previously specified "wet" ceiling construction, the Moraine Meadows School near Dayton, Ohio, would not have been completed in time for the beginning of the fall semester.

locale, building design, and degree of fire protection required. There is no need to pay for extra concrete, lath, plaster, spray-on fireproofing—or water. Labor costs are reduced accordingly. One less building trade is needed.



Acoustical Fire Guard is installed by a completely "dry" method. There are no long delays of the types that are caused by "wet" operations. No extra moisture is introduced into the building. Other building trades don't have to mark time waiting for the interior to dry. Also, Acous-



tical Fire Guard is an interior finish that requires no on-the-job painting.

Not only can Acoustical Fire Guard save time on new construction, it can also speed re-

modeling projects. "Dry" construction can be done during or between school hours.

What's more, Acoustical Fire Guard is able to retard, *without costly intermediate protection*, the passage of flame and the dangerous transmission of heat. And it gives your schoolrooms a quieter atmosphere for study and concentration.

Acoustical Fire Guard is available in three designs—Fissured, Classic, and Full Random.

For complete information about new Armstrong Acoustical Fire Guard ceilings, consult your school architect or your Armstrong Acoustical Contractor. He's in the Yellow Pages. Or you can write Armstrong Cork Company, 4208 Ross Street, Lancaster, Pennsylvania.

Here is a partial listing of schools for which Armstrong Acoustical Fire Guard has been chosen:

Centennial High School Circle Pines, Minnesota	Edgewood School Madison, Wisconsin
General Herkimer School Utica, New York	Grant High School Portland, Oregon
University of Chicago High School Chicago, Illinois	Springs Valley High School French Lick, Indiana
St. Charles Junior High School St. Charles, Missouri	Robin-Mickle Junior High School Lincoln, Nebraska

Armstrong ACOUSTICAL CEILINGS

1860-1960 Beginning our second century of progress

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YOURS FOR THE ASKING

This material—promotional and otherwise—contains ideas of possible value to you and your schools. Each item listed will be sent to you without cost.

FOR FREE COPIES, USE READER SERVICE CARD

▼ **Catalog of college costs.** This booklet, published by The Union Central Life Insurance Co., should prove extremely helpful to guidance officials when dealing with college bound youngsters. Titled "A Place in the Sun . . . Through Education," the booklet briefly discusses the advantages of a college education, how much it may cost, how costs can be met and—most valuable—a 38-page listing of colleges and universities throughout the country. Each school is listed alphabetically and its location is given. This is followed by some specific information about the kind of school it is; the approximate costs per year for fees, room and board; tuition costs at specialized schools such as liberal arts, engineering, law, medicine and agriculture; and estimates of total minimum costs and total average costs per year.

For a free copy of this booklet, circle number 882 on the Reader Service Card.

▼ **Basketball coaches digest.** Twenty-six basketball coaches present their coaching theories and techniques in the new 20th edition of the "Seal-O-San Basketball Coaches Digest" available from Huntington Laboratories, Inc. Sections of the digest are devoted to fundamentals, offense, defense and a coaches' clinic. The articles include photographs and play diagrams to help the reader thoroughly understand what is being discussed. Some of the titles included: "Keeping the Awkward Big Man in the Scoring Area," "Guiding Principles for the Beginning Basketball Coach" and "A Ladder Tournament for Free Throw Accuracy."

For a free copy of this digest, circle number 862 on the Reader Service Card.

▼ **Planning for textbooks.** How to plan textbook budgets is described in detail in this 20-page brochure published by The American Textbook Publishers Institute. Divided into

three sections, the booklet describes the place of textbooks in today's schools; gives specific hints on how to make a book inventory and how to estimate textbook needs for elementary, junior high and senior high schools; and offers 1960-level prices for textbooks, workbooks and tests. Included in the booklet is a worksheet for estimating textbook budgets. Kits of reading materials—together with their prices—are suggested for grades one through six and average net prices are given, as well, for selected high school textbooks.

For a free copy of this booklet, circle number 884 on the Reader Service Card.

▼ **The importance of color.** The psychological and functional values of using the right paint color for school rooms is discussed in a new booklet from Tropical Paint Co. Proper colors are recommended for walls, ceilings, floors, furniture, lockers, stairwells and corridors as well as for swimming pools, chemistry labs, gyms, and the variety of specialized areas found in most schools. Attention is given, too, to the best color combinations for rooms with windows facing in the various directions of the compass.

For a free copy of this booklet, circle number 874 on the Reader Service Card.

▼ **Cost-cutting recipes.** A booklet of economical recipes—featuring distinctive main dishes and sauces—is available from Campbell Soup Co. The specially created dishes employ canned condensed soups as ingredients. Full color table tents and menu clip-ons for each main dish are also available from the company.

The seven main dish and four sauce recipes featured—all illustrated in full color—include: beef roulades with mushroom sauce, veal paprika, baked turkey and asparagus sandwich au gratin, baked flounder filets royale, lamb ragout en cassole, curried chicken polynesian, scallops and shrimp imperial, creole sauce, cheese

sauce macedoine, cream sauce printemps and tomato wine sauce.

For a free copy of this booklet, circle number 844 on the Reader Service Card.

▼ **How to lease lighting.** Complete details of Smithcraft Corporation's lease-light plan for the leasing of fluorescent lighting equipment for new or old buildings are contained in a four-page brochure available from the company. By renting or paying on time for lighting modernization or new construction, working capital can be freed for other uses. There is no upper limit to the total contract price. Under the plan, Smithcraft pays the distributor and electrical contractor while payments by the user are made to General Electric Credit Corp.

The brochure contains most of the information necessary to plan for a complete lighting installation by this method. A chart of approximate monthly rental charges is included, as well as a comparison of the total capital invested when buying, renting or time-paying for installed lighting equipment.

For a free copy of this brochure, circle number 842 on the Reader Service Card.

▼ **How to use a slide rule.** A comprehensive guide to slide rule instruction is now obtainable from Pickett & Eckel, Inc. Written by Dr. Maurice L. Hartung, the University of Chicago, the 48-page booklet is a complete treatise on the subject. It is subdivided into 12 sections that can be applied to classroom use in their original order or as the teacher may see fit.

For a free copy of this guide, circle number 841 on the Reader Service Card.

▼ **Selecting amplifiers.** It is easy to choose the right amplifier for each sound application with the new amplifier "Select-a-Guide" just issued by the Audio Products Department, Radio Corporation of America. The brochure dis-

A JACK-OF-ALL HELPS

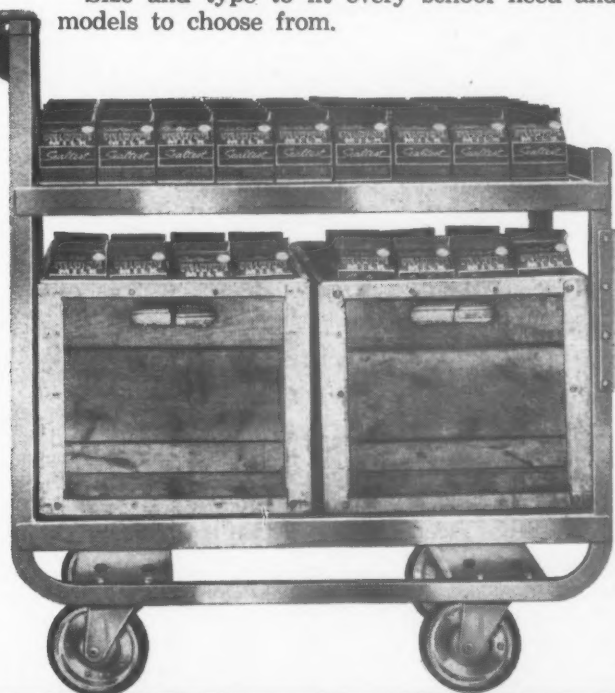


... these
Lakeside
carts

and so handy even students can handle them with ease

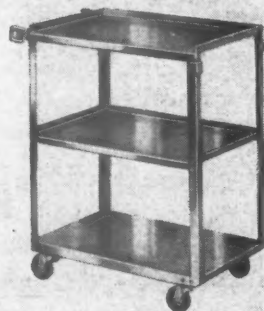
There are dozens of ways in which a Lakeside cart can be a helping hand. In fact, it will quickly become such an important part of your work-saving efforts as to be indispensable. Use these carts to pick up dirty dishes and trays; to transport cases of milk, canned goods and other bulky items, or for portable storage space, etc.

Size and type to fit every school need and budget — 23 models to choose from.



A WIDE RANGE OF MODELS TO SERVE EVERY NEED

LIGHT WORK



Model 311
Capacity200 lbs
Price\$35.75

MEDIUM WORK



Model 444
Capacity400 lbs
Price\$102.00

HEAVY-DUTY WORK



Model 744
Capacity600 lbs
Price\$149.00

23
Models
Priced
from
\$35.75
to
\$275

LAKESIDE ACCESSORIES — so handy to have around



Platform Truck
\$32.50

Utility Dolly
\$16.50

Garbage Can Dolly
\$13.75

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AMERICA'S CART HEADQUARTERS

Available thru all institutional food service equipment dealers

(Circle number 724 for more information)

THINGS YOUR PUBLIC OUGHT TO KNOW

Basic information that schoolmen can use as part of a community education program

What teachers and superintendents say about air conditioning schools

■ ■ ■ What is the real value of air-conditioned schools? Are they just a more pleasant place in which to work, or do they really contribute to the basic job of schools—educating children?

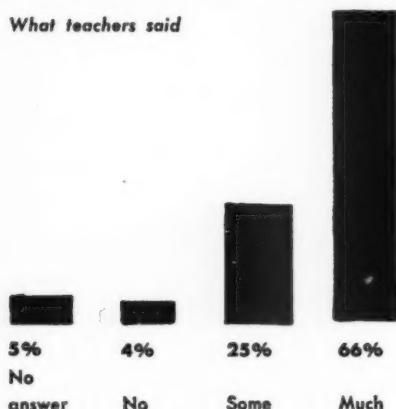
Two recent surveys throw some light on the question of the value of air conditioning to education. One was conducted by a teacher, Mrs. Eva McDonald of Alton, Ill. (See "Some blunt facts about air-conditioned schools," *SM*, April '60, for a review of air conditioning in the Alton schools.) Mrs. McDonald surveyed 125 teachers in Roswell and Hobbs, N. M., San Angelo, Tex., and Alton, all of whom had taught in both air-conditioned and traditional schools.

The second survey was the work of Superintendent Paul Miller of Syracuse, N. Y. Miller sent his questionnaire to city school superintendents across the country and received 300 replies.

In relation to their own work, almost all teachers reacted favorably

DOES AIR CONDITIONING GIVE MORE TIME FOR TEACHING?

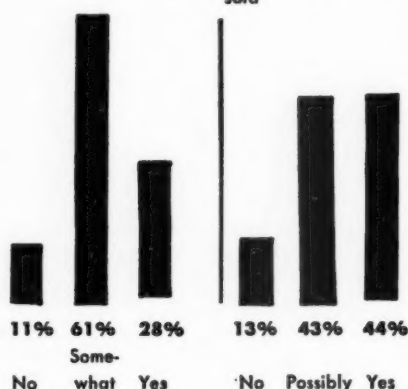
What teachers said



to the prospect of air conditioning. More than 95% said that it resulted in less fatigue. Almost an equal number found themselves more

WILL AIR CONDITIONING RESULT IN BETTER STUDENT GRADES?

What teachers said What superintendents said



agreeable in the classroom and 91% said that air conditioning resulted in more time for teaching.

What teachers think

But valuable as teachers are, they are not the people for whom we build schools. When asked about the effect of air conditioning on students' grades, 28% of the teachers expressed the opinion that it had "much effect on improvement of grades." More than half the teachers who had had experience with students in air-conditioned and traditional schools, said that air conditioning had "some effect," while only 6% thought that air conditioning made no difference. (No opinion: 5%.)

When Superintendent Miller asked the same question of fellow superintendents, most of whom had not operated air-conditioned

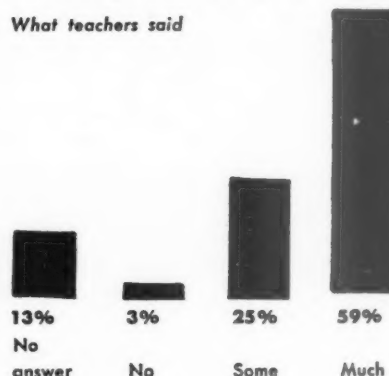
schools, the answers were quite similar. Forty-four percent of the superintendents thought that air conditioning would have a great deal of effect on grades and 43% were inclined to believe that there would be some effect. Only 11% of those responding to this question thought there would be no effect.

But why does air conditioning bring an improvement in grades? The teachers gave these answers: There is a greater ability to concentrate (85% said much greater); there is a willingness to do more research (38% said much more willingness, 20% some more willingness, 37% no answer because the question did not apply to their schools); and there was more effective use of study time (59% said much more effective, 25% somewhat more effective).

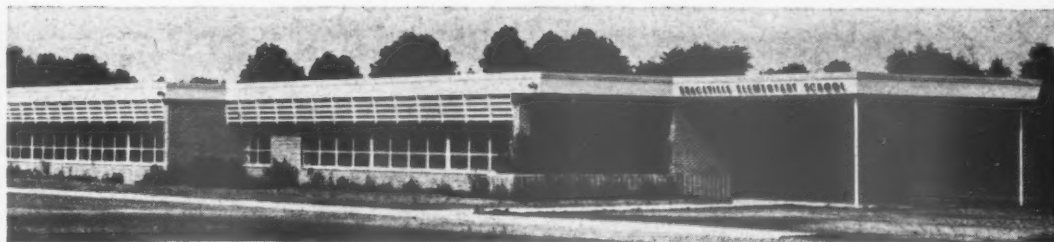
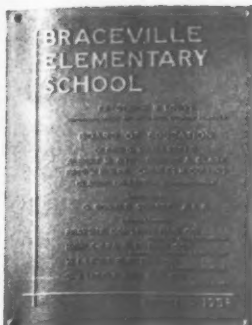
Teachers found it easier, too, to introduce new subjects and skills (50% said much easier) and they discovered that there was less tension in the classrooms (66% said much less tension). There was also

DOES AIR CONDITIONING RESULT IN BETTER USE OF STUDY TIME?

What teachers said



SCHOOL MANAGEMENT



Chromalox Electric Unit Ventilator automatically draws fresh outdoor air for cold weather ventilation or warm weather natural cooling. Convected heat from flanking Chromalox Draft Barrier Heaters breaks up downdrafts from windows.



Why this school is heated electrically by CHROMALOX

Three major factors enter every consideration of available school heating methods . . . economy, comfort and safety. For all three reasons, the Architect specified, and the Board of Education approved Chromalox electric heat.

Economy? Installed cost and estimated operating cost of Chromalox Electric Heat were less. Initial savings were more than enough to pay for construction of an additional classroom. During last winter's 15% colder-than-normal weather, operating costs were 10% below the original estimate. No boiler room, boiler, chimney, coal bins, storage tanks, pipes or ducts. No boiler insurance. No need for boiler depreciation-and-repairs budget allowance. Less custodial responsibility. Permits future expansion of building with ease

and economy. *Comfort?* Accurate temperature control is easy with Chromalox Electric Heat. Electric heat is clean. No soot, no leaky pipes, no fuel or combustion odors. *Safety?* Electric heat is the safest possible. No fumes, flames or explosions. As safe as an electric light.

Aren't these good reasons why *your* school should be heated by Chromalox? Write us for more facts and figures on Chromalox Electric Heat for this and other schools.

91093

Braceville (Ohio) Elementary School: 13,900 sq. ft.
 Architect: G. Donald Schade, A.I.A. *

Power Company: Ohio Edison Company

Consulting Engineers: Meckler Engineering Company

Electric Heating Contractor: W. I. Lewis Electric Company

*Read the Architect's comments . . . See Page 82



CHROMALOX ELECTRIC HEAT

Edwin L. Wiegand Company

7500 Thomas Boulevard • Pittsburgh 8, Pa.

(Circle number 741 for more information)

Look what's happened to the little



Design your schools better with PITTSBURGH

white schoolhouse!

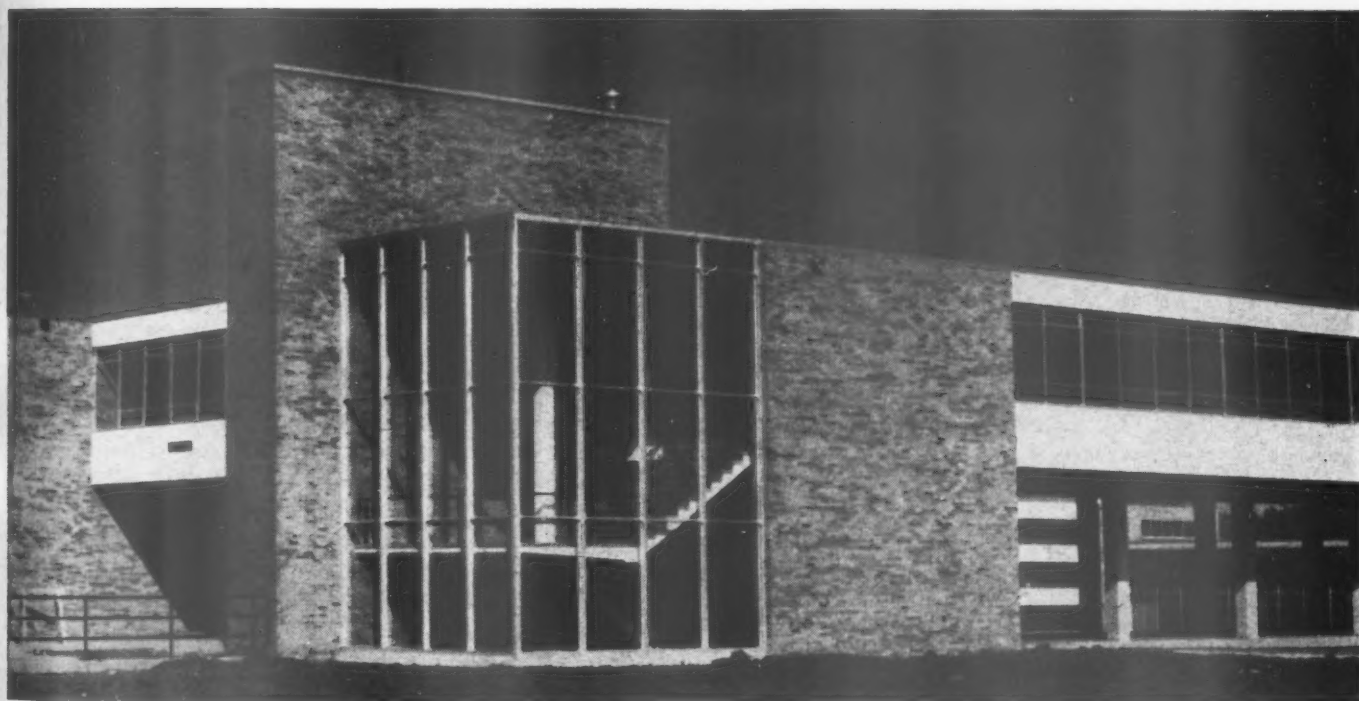
The schools that seemed good enough for us are *not* good enough for our children. Ferndale High School in Ferndale, Michigan, is proof that something *is* being done to meet the urgent demand for new and better schools.

In Ferndale, the antiquated wooden boards of the little white schoolhouse have given way to modern glass curtain walls. The old-fashioned windows—too few and too far between—have been replaced with thousands of square feet of Pittsburgh Polished Plate Glass, PENNVERNON® Window Glass and 1/4" HERCULITE® Tempered Plate Glass. And in the rooms inside, highly reflective Pittsburgh Mirrors have provided a new feeling of spaciousness and beauty.



The dark, cramped, cheerless environment of the old schoolhouse is gone for good. Pittsburgh Glass has helped give the children of Ferndale a big, bright, beautiful, new high school.

Architect: Jahr-Anderson-Machida Associates, Dearborn, Michigan.
General Contractor: Darin & Armstrong, Inc., Detroit, Michigan.



CONSULT YOUR ARCHITECT for information about the use of these famous Pittsburgh Glasses in school construction:

Solex®.....green tint, heat-absorbing and glare-reducing plate glass
Solargray®.....neutral tint, heat-absorbing and glare-reducing plate glass
Herculite®.....shock-resisting tempered plate glass
Twindow®.....the world's finest insulating window

Polished Plate Glass.....for clear, undistorted vision
Pennvernon®.....window glass at its best
Spandrelite®.....glass in color
Pittco®.....glass-holding and decorative metal members

GLASS



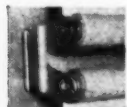
Pittsburgh Plate Glass Company

Paints • Glass • Chemicals • Fiber Glass In Canada: Canadian Pittsburgh Industries Limited
(Circle number 731 for more information)



It's so easy to control lighting with STEELECO shades

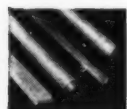
There are STEELECO canvas duck window shades to give perfect light control for any building. And, STEELECO shades are durable, easy to adjust . . . economical, too, because they last years longer, here's why:



Reinforcing is used in all sewing to keep STEELECO shades looking new much longer. As an added precaution, shades do not come into contact with brackets.



Extra heavy Tex-Steele double-thread cotton duck gives added strength and body. No starches or fillers are used. Can be quickly washed, brushed or dry cleaned.



Long life bronze bearings insure smooth, quiet operation. Oversize springs respond instantly to your touch. Hardwood or metal slats . . . much larger and stronger than ordinary commercial slats.

Mail this coupon for free catalog and name of your nearest STEELECO dealer.

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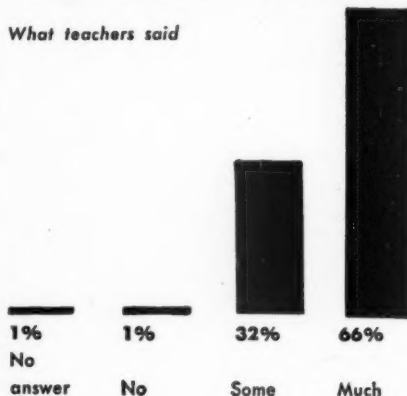
CITY _____ STATE _____

(Circle number 736 for more information)

14

DOES AIR CONDITIONING RESULT IN LESS STUDENT TENSION?

What teachers said



less student fatigue (97%) and less student drowsiness (96%), according to the teachers.

Finally, the teachers turned again to their own point of view and expressed the opinion that there was more time to teach. Partially because there was less need to rearrange classroom schedules (90%) and displays and projects remained in better condition (89%).

The superintendents' view

The primary purpose of air conditioning is to create a more pleasant climate in which to work, study and play. But there are secondary effects too. The questionnaire sent out by Superintendent Miller asked which of the secondary benefits claimed for air-conditioned schools are important in planning a new building.

The answers showed that almost 60% of the superintendents felt that air conditioning would lead to lower maintenance costs. Community use of the schools was considered an advantage by six out of 10 and maximum use of school grounds was cited by half of those replying. Almost half also felt that air-conditioned schools would result in greater flexibility.

Questioned on the possible educational benefits, the superintendents "believed firmly" or were "inclined to believe" that air conditioning would make schools more comfortable in hot weather (76% and 20%); would make schools more comfortable throughout the year (37% and 38%); and would permit use of the building in the summer (64% and 25%).

Better grades would probably result according to 44% of the respondents, with another 43% in-

clined to believe that this might happen. An improvement in pupil attitude was the firm belief of 36%, while another 45% thought this was a good possibility.

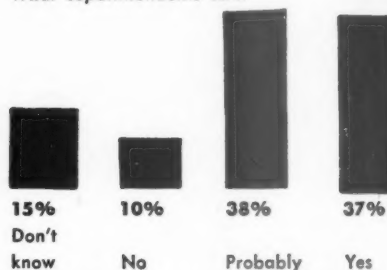
Teacher performance, the superintendents indicated, would also improve. Forty-three percent said they believed this firmly while another 44% were inclined in that direction. Teacher attitudes would undoubtedly improve, said 43%, with another 39% tending to agree.

The superintendents were also asked to estimate how various groups in the community felt about air conditioning. Their answers were particularly instructive. Only 2% of the respondents thought teachers did not favor air conditioning. Architectural consultants and state school authorities were also considered to be overwhelmingly in favor of air-conditioned schools.

According to 40% of the superintendents, parents favor air conditioning, while 12% thought that

WILL AIR CONDITIONING RESULT IN MORE COMFORT, YEAR ROUND?

What superintendents said



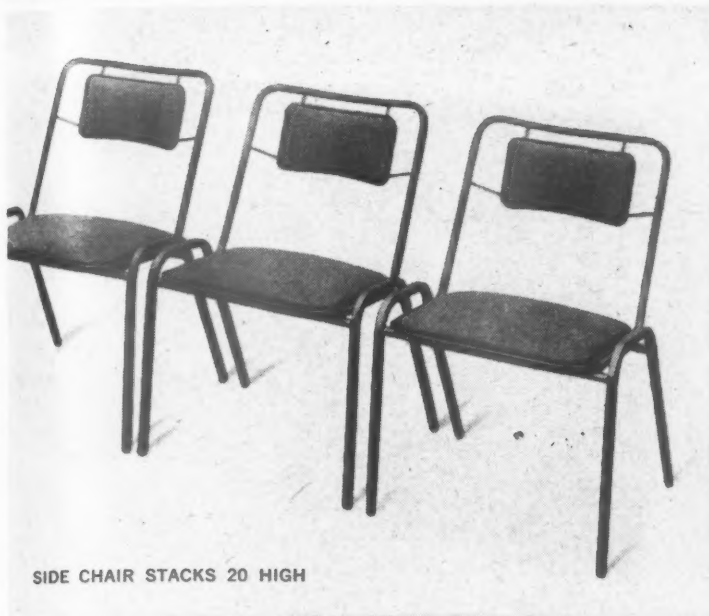
most parents opposed it. School board members were said to favor air conditioning by only 36% of the superintendents. Another 36% had no opinion on how their board members felt, while 28% thought that they were generally opposed to the idea.

When it came to estimating the opinions of citizens at large, half the superintendents said they didn't know what the public thinks! Only 18% thought the citizens were in favor of the idea and 32% said they were opposed.

In essence then, to most teachers and superintendents there are great advantages to air-conditioned schools. The idea, it seems, must be sold to board members and the public at large. Certainly, then, the educational advantages of air-conditioned schools are important for your public to know. **End**

SCHOOL MANAGEMENT

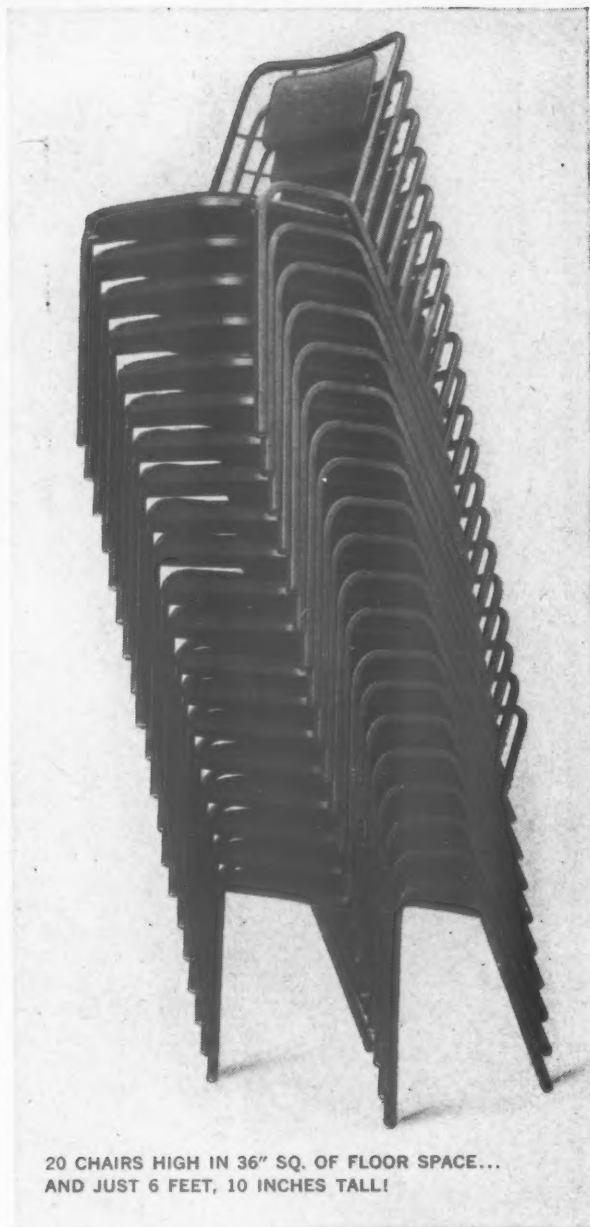
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SIDE CHAIR STACKS 20 HIGH



ARM CHAIR STACKS 7 HIGH



20 CHAIRS HIGH IN 36" SQ. OF FLOOR SPACE...
AND JUST 6 FEET, 10 INCHES TALL!

THE WORLD'S MOST BEAUTIFUL, MOST COMFORTABLE STACKING CHAIRS!

Samsonite answers your storage problem with ultra-modern Stacking Chairs.

You can store up to 20 of these beautiful chairs in floor space for one. They're light-weight...easy to handle, practical to use as pull-up chairs. And they won't mar walls, thanks to unique leg construction. The vinyl upholstery on the generously padded seats and contour-curved backrests wipes clean with a damp cloth. All

metal parts are Bonderized to resist rust, and finished in chip-resistant baked enamel in your choice of 5 colors (Grey Munster, Gala Red, Gala Blue, Tan Munster, Antique White). Built with electrically welded all-steel square tube frames, Samsonite Stacking Chairs are well worth their small extra cost for they'll give extra years of rugged, attractive, *comfortable* service! Invest now in Samsonite Stacking Chairs.

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For church, school, club, other group seating information, see your Yellow Pages or write: Shwayder Bros., Institutional Seating Div., Dept. SM-80, Detroit 29, Mich. © 1960

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GORDON W. GUNDERSON
State School Lunch Supervisor
Madison, Wisconsin

"Food Service Problems in Outlying Schools Can Often be Solved with Paper"

Mr. Gunderson has helped to make Wisconsin a leader in the move to extend food service to outlying schools.

He has found that one of the most practical ways to provide lunches in buildings without facilities is to prepare the food in a central kitchen, transporting it in insulated carriers and serving it in sanitary paper cups and containers.

The central kitchen can prepare lunches for additional schools at little extra cost. The use of paper, Mr. Gunderson has learned, eliminates virtually all need for further food service equipment.

HELPFUL IDEAS FOR YOU

The above brief report is further evidence of how the many advantages of all-paper service can improve any mass feeding operation, large or small. Your paper wholesaler will be glad to discuss with you how this modern food service can be of practical value in your own operation. Phone him today.

The Paper Cup and Container Institute, Inc.
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PAPER
the personal
food service

(Circle number 729 for more information)

SM

WHERE TO GET HELP

A guide to useful information

ELEMENTARY EDUCATION

Teachers advise parents. What parents want most in guiding their children through school from kindergarten to the sixth grade are facts about subjects and suggestions about how to make them interesting. This handbook for parents of children in the elementary grades adopts a distinctive format—chapter-by-chapter coverage of all the elementary grade learning areas, with chapter-end lists of simple, concrete things parents can do to help their child in each area.

For example, they are told how they can interest children in applying arithmetic skills "right around home." One way: encourage children to double check grocery receipt tapes. Another: encourage a child to keep mileage and gas records on an auto trip.

The illustrated, 12-chapter booklet includes sections on: reading, spelling, handwriting, arithmetic, science, social studies, art and music, foreign language, health and physical education, homework and report cards.

HOW TO HELP YOUR CHILD LEARN. *Department of Elementary School Principals, 1201 Sixteenth Street, N.W., Washington 6, D.C. 40 pages. Single copy, 50 cents; two to nine copies, 45 cents each; 10 or more copies, 40 cents each.*

Class size. Traditionally, the optimum size of an elementary class is given as 25. Few school districts are able to maintain this standard, however, according to this NEA study. Of the 13 million children in urban elementary schools, 11 million are in classes of more than 25; six and one-half million are in classes of more than 30; and more than two million are in classes of 35 or more. In addition, 380,000 are in classes of more than 40 and 71,000 are in classes of more than 45.

Half of the 26 school districts in the nation with a population of 500,000 or more have some pupils on half-day sessions. Nearly one-third of the school districts ranging in population from 100,000 to 499,999 are in the same position. But in the smaller districts, overcrowding is far less acute.

Can these crowded conditions be overcome? Only, according to the re-

port, if 92,024 classrooms and a like number of teachers were available. Then all elementary classes would be held at a maximum of 25. If all present classes were regrouped to keep maximums to 30 students, then needed new classrooms and teachers would number 28,290.

CLASS SIZE IN URBAN ELEMENTARY SCHOOLS, 1959-60. *National Education Association, 1201 16th St., N.W., Washington 6, D. C. 26 pages. 50 cents.*

SUPERVISION

Student activities. Very little in-service training is available in most schools to help teachers cope with the tremendous growth that has taken place in extra-curricular programs. This handbook provides much useful information about the duties, procedures and responsibilities of the teacher assigned to directing student clubs and other after-hours groups. Along with specific suggestions about organization and operation, the handbook offers a number of rating sheets which the teacher-supervisor should find helpful in gauging the growth and progress of the club or other activity she guides. Those interested in obtaining more information on this subject will find the bibliography given at the back of the handbook an extremely valuable reference.

HOW TO SPONSOR STUDENT ACTIVITIES, *by Everett M. Shepherd. Shepherd Publications, 2405 Campbell St., Commerce, Tex. 92 pages. \$1.50.*

HIGHER EDUCATION

Selection of applicants. It is estimated that by 1965, 1.3 million freshman applicants will be seeking admission to college, an increase of 57% over the number of freshmen enrolled this year. If, as many educators believe, colleges cannot or will not expand to meet that demand, how will selection be made of college candidates?

At last February's meeting of the American Educational Research Association, seven prominent educators discussed this question. The uses and

continued on page 21

It gave me a new lift out of life



"I never dreamed
how much a
Study-Center
could help
a child"



© 1960 American Seating Co

"A TEACHER is bound to get some pretty firm ideas about school furniture. Imagine how pleasantly surprised I was to report to a modern new school with American Seating Study-Centers for the students!

"I'm the luckiest teacher in town.

"The Study-Center is attractive and colorful—you'd be surprised how much more comfortable and relaxed this makes a classroom look and feel. It's neat and uncluttered, with a marvelous roomy book-box.

"It's all in one piece, yet surprisingly light. I can have my pupils rearrange their Study-Centers into new groupings within minutes . . . and much as they'd like to, they just can't make much noise doing it!

"It's comfortable. You can be sure of this when you see a roomful of children *not* slumping, *not* squirming, *not* fidgeting.

"The seat swivels both ways, so the children can move about freely without disturbing others. The top can be sloped or set level—whichever angle is best for vision and posture. Both seat and desk-top are adjustable. Believe me, it's so much more satisfactory to fit the desk to the child than the child to the desk.

"How much difference does a Study-Center make? Until we moved into our new school, for example, Johnny Burton was definitely a teach-

er's problem. He not only wouldn't do his best—but he created disturbances which disrupted classwork and kept others from doing their best.

"Since he's had an individual Study-Center—a desk that doesn't restrict his movements—he's not noisy any more, and his work is improving.

"I have another pupil—a gifted young girl. I couldn't get her to raise her eyes more than two inches above the top of her pencil at her old desk. She's been sitting up like a doll since the first day she got her Study-Center. Posture problems, reading problems, and many emotional problems with students have vanished.

"I think we sometimes forget how many hours children spend sitting . . . learning to concentrate, learning to get along with one another, learning to use their hands and their minds. A desk has to be a very versatile piece of furniture to fit in with all of the many ways we teach and learn.

"I've mentioned this to mothers lately when they've remarked about the improvement in their children's grades and attitudes toward school. And when our discussions turn to improving evening study habits, do you know what I tell them? Get Study-Centers for their children's rooms. Study-Centers can work the same wonders at home as they do at school."

Point to remember: Schools are built to give students a place to sit and learn (they'll *sit* 15,000 hours, kindergarten through college). Thus, the selection of school furniture demands your serious consideration. School furniture is the *most important* single equipment purchase you're called upon to make that affects both the physical and intellectual development of children. So when it comes time to buy furniture, think in terms of eager, ambitious youngsters.

Study-Center is a trademark of the American Seating Company.

NEAT?...OR...BEAT?



Study-Centers give students a lift for life.



Eliminate posture problems of old-fashioned furniture.

Once a Study-Center Desk is adjusted to a child, posture problems disappear forever.

With a Study-Center, it's actually an effort to slouch or slump.

Your children will sit at desks 15,000 hours, kindergarten through college.

See that your schools have American Seating desks (there's a type for every need).

A Study-Center costs less than a penny a week more than ordinary furniture.



The standard by which all public seating is measured
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MANUFACTURERS OF SCHOOL, CHURCH, AUDITORIUM,
STADIUM, THEATRE, HOSPITAL, AND*TRANSPOR-
TATION SEATING; FOLDING CHAIRS AND TABLES

*One of a series of public service advertisements currently appearing in
LIFE, TIME, and THE SATURDAY EVENING POST.*

abuses of aptitude and achievement tests were discussed by several and a greater emphasis was called for to seek out talent not readily measured by the commonly used tests. It was proposed that college entrance not be restricted on the basis of a narrow battery of tests, unsupported by personal interviews and other relevant data. Cited in support of this proposal was a study made of the 1,006 members of the 1955 graduating class at the University of Kansas. Two hundred and eight of them would not have been admitted as freshmen had the decision been made on the basis of tests given for purposes of placement.

THE COMING CRISIS IN THE SELECTION OF STUDENTS FOR COLLEGE ENTRANCE. *American Educational Research Association, 1201 16th Street, N. W., Washington 6, D. C. 39 pages. \$1.00.*

Correspondence courses. Thousands of correspondence courses offered by 52 of the fully accredited colleges and universities which are members of the National University Extension Association are listed in this correspondence study guide. Credit and non-credit college level courses are listed under 580 topical headings, ranging from engineering to Arabic, and forestry to fine arts.

Although students may earn credit toward college degrees through correspondence work, no accredited college or university offers a degree solely by this method of study. Often, however, as much as half the work required may be in the home study category.

GUIDE TO CORRESPONDENCE STUDY IN COLLEGES AND UNIVERSITIES. *National University Extension Association, Business Office, Building TSMc, Room 112, University of Minnesota, Minneapolis 14, Minnesota. 35 pages. 25 cents.*

AUDIO-VISUAL

Airborne TV instruction. The purposes and progress to date of the Midwest Program on Airborne Television Instruction are briefly outlined in this booklet just published by the organization.

The real purpose of the publication is to help schools in the midwest area determine whether they wish to participate in the program when it gets underway in February, 1961.

At that time, educational courses on video tape will be telecast from a plane at high altitude over north-central Indiana. The telecasts will cover an area 150 to 200 miles in portions of six states: Illinois, Indiana, Kentucky, Michigan, Ohio and Wisconsin. Trial-

continued on page 25



AT LAST! A WAX-FREE POLISH FOR ALL FLOORS, ESPECIALLY THOSE THAT TAKE A DAILY BEATING!

The floor in the home economics classroom, the floor in the science lab, the floor near the main entrance...any floor that takes a daily beating is a floor that needs Contrast® protection! Spills mop up. Scuffs don't show. And this amazing new Huntington polish cannot discolor even pure white floors. It shines as it dries...no buffing required. Black marks, slippery surfaces, water spots, old-age darkening, powdering, flaking, all are problems of the past. Put a tough, hard Contrast finish on a problem floor...you'll soon use it throughout the building. A gallon goes a long way...approximately 2500 square feet. Get complete details from our representative, The Man Behind The Huntington Drum. Don't neglect it. This product does solve problems. • Huntington Laboratories, Huntington, Indiana, Philadelphia 35, In Canada: Toronto 2.



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The best new cafeterias are planned a

Surprising? Not when you know the facts. Because they prove that the cafeteria that starts with Dixie ends up being more economical, efficient, sanitary and—well, just plain nicer. ■ Let's talk Dixie economics, first. Like the storage space you don't have to build. And the dishwashers you don't have to install (or hire!). There are long-term savings, too. On breakage. Also on waste: because Dixie has the most extensive matched service on the market, you can pick your plates and cups for precise portion control. ■ As for efficiency—Dixie Matched Food Service sets you up for advance portioning to cut way down on slack work periods. Not to mention the time saved on washing up. On hiring, firing, and training unnecessary kitchen help. ■ Why more sanitary? That one's easy. If

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ed around Dixie* Matched Food Service!

hat you stop to think that a Dixie service gets used just once. ■ When it comes to morale-ain building—remember, Dixie Matched Food Service means 23 pieces in one home-y patternild. —tray after tray that looks as though you care about your students. Another happy gs, feature is Dixie's exclusive Mira-Glaze® Cup. The paper cup that doesn't spoil the tasteice of good coffee. Faculty, and high-school students, will bless you for it. One last Dixie for plus: nothing quiets a cafeteria faster except a visit from the principal. ■ Building a new way cafeteria? Talk to your Dixie Cup representative. While you're still in the blueprint stage. ng, If

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Is he learning...

or just being entertained?

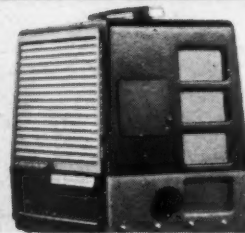
He's learning... if the classroom audio-visual equipment is designed, as only Bell & Howell equipment is, to be an active educational aid rather than a medium of entertainment. The full benefits of teaching with audio-visuals can be achieved only through built-in features and controls that make the teacher the *complete master* of the lesson rather than a bystander. Only Bell & Howell gives these to you, along with unmatched ease of operation.

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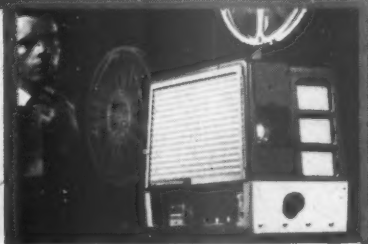
gotten the best value for its money. Program assistance and service is provided by an expert Bell & Howell Audio-Visual Representative in your area.

If you're going to specify audio-visual equipment soon... if you're interested in the added teaching power audio-visuals can give your school... write us today. There's no obligation. Education Dept., Bell & Howell, 7127 McCormick Rd., Chicago.

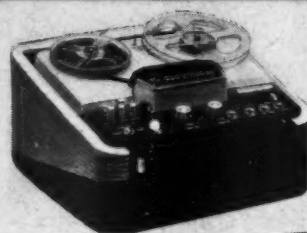
Qualifies for purchase under
Public Law 864. (National
Defense Education Act).



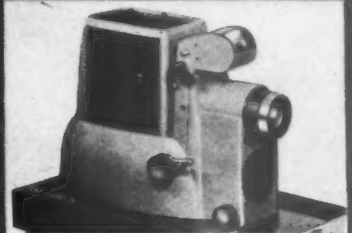
399AV. Stops on single scene for class discussion. Reverses instantly, lets you repeat scenes until they are clearly understood.



Filmosound 302. Add high-fidelity magnetic sound to any 16mm film, automatically. Doubles the value of language teaching film.



786AV-1. 2-Channel Tape Recorder. Teacher records lesson on one channel. Student listens, records answers on second channel.



724 Slide and Filmstrip Projector. Simple instructions on projector. Projects even in semi-lighted room to permit note-taking.

FINER PRODUCTS THROUGH IMAGINATION



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SCHOOL MANAGEMENT

run demonstrations will begin in February of next year. The first full academic year of telecasting will begin in September, 1961, and continue until the following June. Program material will cover a great range of subjects including: foreign languages, science, mathematics, music, art and the humanities.

Outlined in this booklet are equipment needs that must be considered by schools wishing to participate, together with specific information about costs, financing, and optimum conditions for viewing and listening. Also included are some alternative equipment installations that can be used.

MIDWEST PROGRAM ON AIRBORNE TELEVISION INSTRUCTION. Published by MPATI, Memorial Center, Purdue University, Lafayette, Indiana. Free.

Teaching machines. This 80-page supplement to the "Audio-Visual Communication Review," is the most complete annotated bibliography on teaching machines available to date. The material, originally supplied for the Office of Naval Research by the Electronics Personnel Research Group, Dept. of Psychology, University of Southern California, is designed to save many hours of library research for those interested in learning about automated teaching devices.

In a final section, a catalog of commercially developed teaching machines is given.

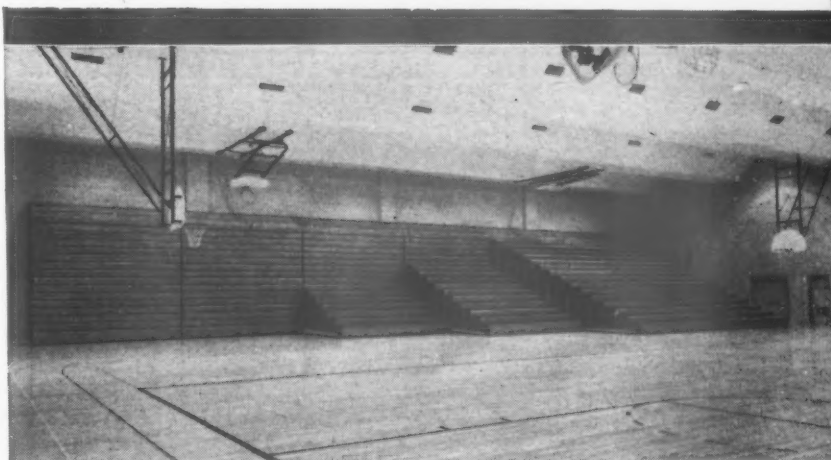
TEACHING MACHINES: AN ANNOTATED BIBLIOGRAPHY. Department of Audio-Visual Instruction, NEA, 1201 16th St., Washington 6, D. C. 80 pages. \$1.50.

PHYSICAL EDUCATION

Planning the school pool. Valuable information about school swimming pools is offered in this recent manual on the subject. Whether your school already has a pool or is only planning one, you will find these sections of the book most helpful: Determining the aquatics program; selecting the architect and arranging for engineering services; designing the pool basin and pool room desks; and purchasing pool room equipment. Specifications are given for both indoor and outdoor pools as well as auxiliary areas—spectator toilets, dressing rooms, office space, etc.—according to function and the number of students that are to be served.

A GUIDE FOR PLANNING THE SCHOOL AND COLLEGE SWIMMING POOL AND NATATORIUM, By William L. Terry. Teachers College, Bureau of Publications, 525 West 120th Street, New York, N. Y. 73 pages. Paper. \$2.50.

this 18-row telescoping gym seat installation is operated MANUALLY



New Safway telescoping gym seat installation at Menomonee Falls High School, Menomonee Falls, Wis.; architects—Kloppenburg & Kloppenburg, Milwaukee. Seating set-up shown is duplicated on the opposite side of the gym (total capacity 2,370).

SAFWAY

TELESCOPING GYM SEATS

quickly opened to any required number of rows or closed to clear the floor

EASY OPERATION of Safway telescoping gym seats means lower handling costs every time you change your set-up. With Safway's straight-line tracking, manual operation is practical for most installations—even the big 18-row bleacher shown above.

Other Safway features are extra-large wheels, non-sticking nylon glides, fewer moving parts and less metal-to-metal friction.

SPECTATOR COMFORT—Ample foot and knee room; inclined seats; good view.

COMPLETE SAFETY—For spectators, gym users and maintenance personnel.

FLOOR PROTECTION—Wheels roll in separate tracks to prevent grooving.

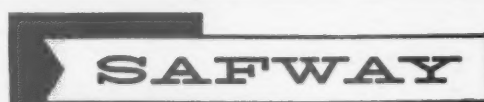
GOOD LOOKS—Seats nest into a vertical cabinet. Rich Golden Oak finish.

COMPLETE LINE—Recessed, wall-attached and portable types.

MOTORIZED OPERATION—Available for larger installations if desired.

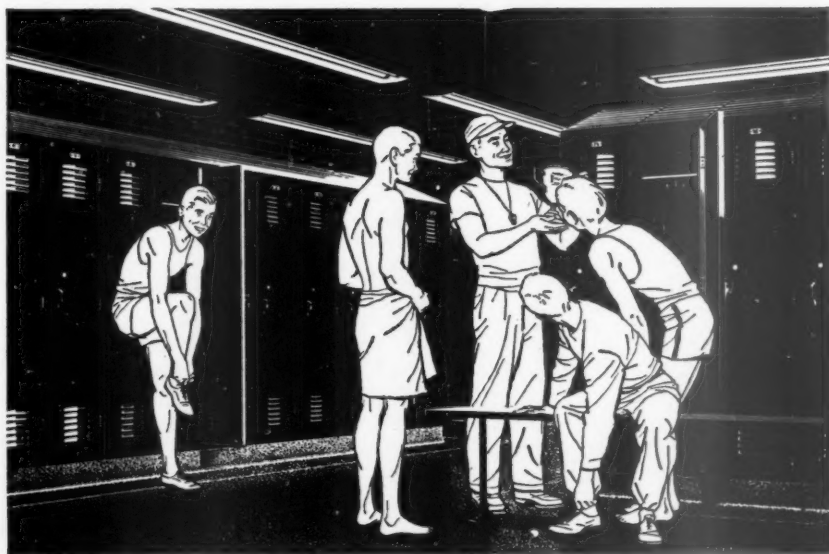


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6228 W. STATE ST., MILWAUKEE 13, WIS.

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REPUBLIC STEEL LOCKERS offer school administrators student accepted advantages in service and economy. Big, roomy interiors are designed for student conveniences. Built-in louvers assure free-flow ventilation—keep locker interiors fresh and clean smelling the year 'round. Bonderized. All steel construction—fire proof. Republic will help you with your locker planning, assume full responsibility for complete installation.

at the head of the class...

TRUSCON Aluminum Classroom Windows

Big! Bright! Economical! Truscon Aluminum Windows are at the head of the class in modern school design, construction, and easy maintenance.

Truscon Aluminum Classroom Windows offer the economy of large glass areas combined with a wide selection of projected ventilator arrangements. Lower in first cost than conventional glass block and ribbon window construction. Lower in maintenance costs with the plus advantage of easy glass replacement.

Truscon Aluminum Classroom Windows are weather-stripped with vinyl plastic around the entire vent perimeter on the inner weathering contact. The unique design of this weatherstripping assures a tight seal, minimum infiltration of air, more comfortable room temperature, and a resultant savings in heating costs. Hardware is polished white bronze, with a selection of cam handles or spring latches. Also available with special removable handle for controlled air conditioning.

Consult your architect. Ask him to check his A.I.A. FILE No. 16-E. Or, call your Republic-Truscon representative for details, specifications, and quotations.

REPUBLIC ELECTRUNITE TUBING, rounds, squares, rectangles, are a building material with unlimited freedom in structural design. Both beautiful and functional. Greater strength, less weight, easy to handle. Smooth, unbroken surfaces resist moisture and corrosion. No sharp corners or bare edges. Easy to join with other structural members. Ask your architect or building contractor to investigate the advantages and economies of ELECTRUNITE Tubing. Write for additional information and specifications.



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☐ Truscon Aluminum Classroom Windows

☐ Republic Steel Lockers

☐ Republic ELECTRUNITE® Tubing

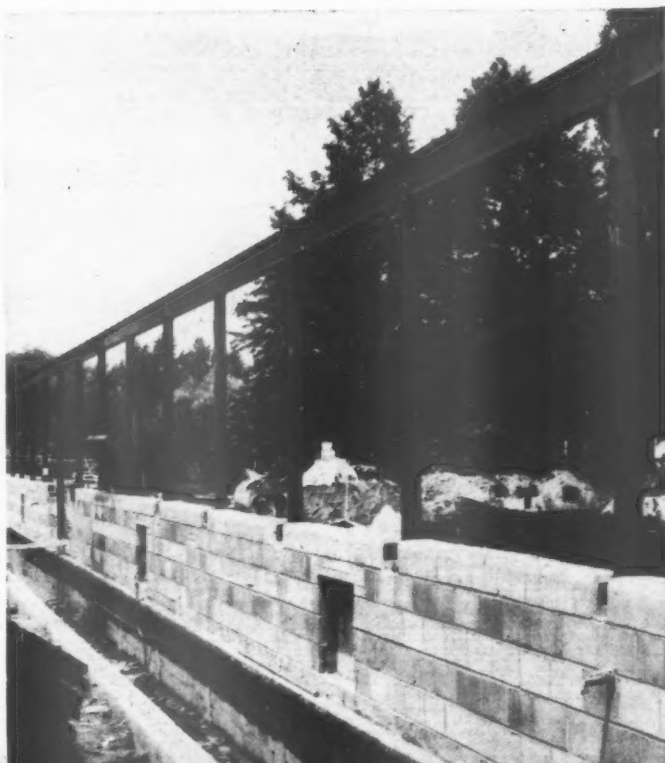
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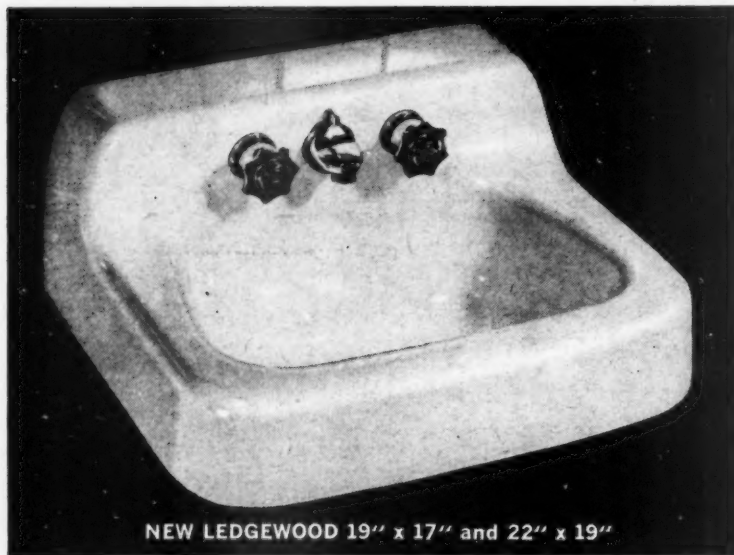
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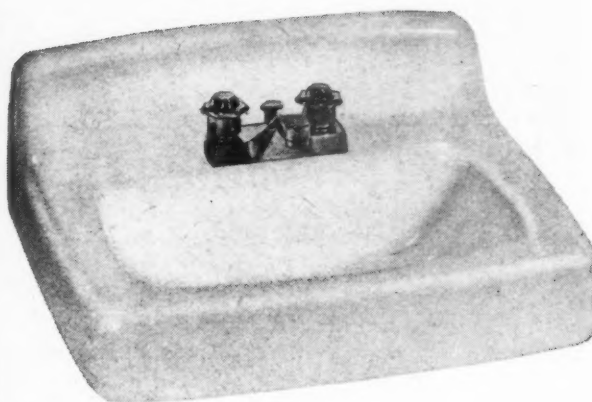
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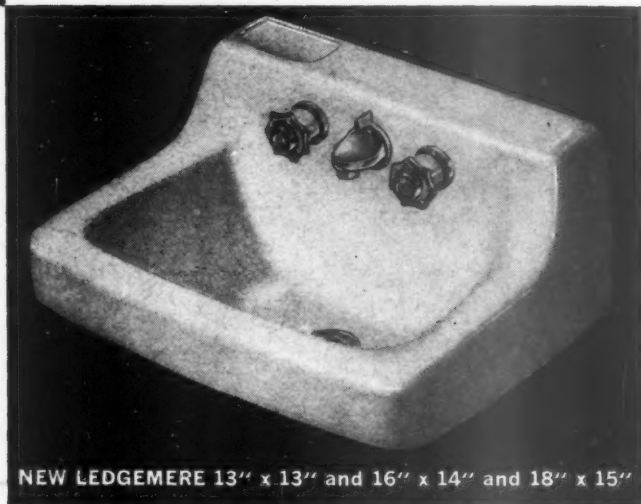




NEW LEDGEWOOD 19" x 17" and 22" x 19"



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NEW CAST IRON LAVATORIES HELP

STRETCH SCHOOL BUDGETS

The clean, modern lines of these new American-Standard cast iron lavatories will complement modern school designs. Budgets will stretch further, too, because of low initial cost and low maintenance. Sturdy cast iron with a thick coating of enamel makes these lavatories longer lasting, more durable. Deep, roomy bowl, front overflow, back splash rim and handy top shelf are features that make these ideal lavatories for school washrooms. All will stay new looking for years.

For more details, contact your American-Standard sales office, or write: AMERICAN-STANDARD PLUMBING AND HEATING DIVISION, 40 West 40th St., New York 18, N. Y.



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AMERICAN-Standard

PLUMBING AND HEATING DIVISION

(Circle number 706 for more information)

A digest of current happenings in public education

Heating experiment undertaken in Minneapolis schools

Experiments to test the relative costs of heating school buildings with different fuels are now underway in Minneapolis. The school board has just accepted an offer from the Upper Lake Docks Coal Bureau to pay part of the costs for installation of coal-burning automatic firing equipment in one school.

The bureau believes that comparison will show that coal can give heat as cleanly, and more economically, than other fuels. The new unit is being put in a building that is more than 60 years old.

Minneapolis is already conducting tests to determine the relative values of gas and electric heating in its Shingle Creek School and 22 other structures are heated with oil.

In a report to the board of education, recommending that Minneapolis test the automatic coal equipment, Superintendent Rufus Putnam pointed out that most of the city's schools are now heated by hand-fired coal systems. "It is imperative," he said, "that many of our heating plants be modernized. Hence, it will be highly beneficial for us to have accurate operating cost data on modern coal-fired facilities." (*To learn how electric heating is operating in two school districts, see page 34 of this issue.*)

Closed-circuit TV permits parents to see classes

Parents in the Las Virgenes school district, Calabasas, Calif., were given an opportunity this spring to really see their children in a school situation. By utilizing closed-circuit television, the district made it possible for parents to visit the school without disrupting classes.

Television sets placed in the school auditorium made it possible for parents to watch their children at work in classrooms without physically intruding their presence. As a result, children studied under almost normal conditions and were not hampered by the appearance of strangers in the room.

Televising took place on four con-

secutive days and parents were given a schedule of which class would be shown each hour. Superintendent John W. Hagen called it "an unprecedented opportunity for parents to see their children at work."

Residency rules thrown out in New Jersey, New Mexico

Attempts of school boards in New Jersey and New Mexico to force administrators and teachers to live in the district in which they work, have been tossed out on the basis of individual rulings.

In the New Jersey case, the Newark school board had demanded that all administrative employees of the system live within the city limits, (*See SM, Oct. '59, page 31*). The board ruled that the 100 affected persons would have to move into the city by January 15, 1961.

The New Jersey Education Association carried an appeal from the board's action to Education Commissioner

Frederick M. Raubinger who has just ruled that the board had no authority to demand residency as a prerequisite to continued employment. According to the commissioner, the residency requirement was not valid because it was not reasonable; it was not in line with other laws—especially the tenure act—and local boards were not granted authority under the state constitution or by legislative act to promulgate such rules.

In the New Mexico case, school officials in Bernalillo had demanded that all teachers live in a group of cottages built near the school site. The board has a policy of requiring teachers to live in the area of their schools, "when housing is available." Up until this year no such housing was available.

Most of the teachers at the Santo Domingo elementary school commute from Albuquerque and Santa Fe. The board's residency ruling was appealed to Assistant Attorney General Philip R. Ashby who handed down an opinion making the residency rule invalid. He did not strike down, however, a rule requiring teachers to live within the district covered by the schools. Since no

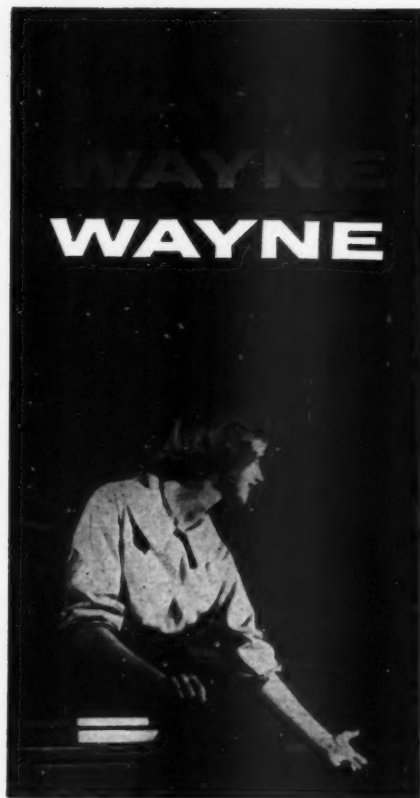
Too good to miss . . .

Value of education . . . Ever get scared by the huge sums you're called upon to spend on education in your community? Think what it's like in New York City. During the 1958-59 school year, the city spent \$508,622,151 on its schools. The total accumulated cost of the school plant is more than a billion dollars. Now, will your community spend another dollar for a filmstrip?

Value of payload . . . While scientists the world over are struggling to put rockets with important payloads into orbit, a sixth-grade student in London, England, is preparing his own trip to the moon. His payload is a little different from that of the scientists, however. Included are ham sandwiches (584), Cokes (764) and cakes and pies (407). We hope the moon-men are hungry.

Value of sentiment . . . Ed Fritz of Hopkinsville, Ky., was high bidder when the 50-year-old Fiarview high school was put up for sale. He wanted the building for sentimental value. Fritz helped erect the school, nine of his children attended it and three taught there.

Question of values . . . The House Appropriations Committee—on one and the same day—refused a request from school officials in Washington, D. C., for \$7 million to build four badly needed elementary schools, then turned around and appropriated \$5 million to buy and clear land to "beautify" the area around the House Office Building.



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30

To the rescue

When newspapers and magazines reported the plight of high school girls in Louisa, Va., who refused to go to their own prom shorn of high spike heels (See, "Heels threaten high school prom, SM, May, '60, page 46), it took a man from Missouri to get things back on the right track.

The whole incident started when Principal W. Dean Meredith ruled that the metal-tipped spike heels girls like to wear were verboten on the highly polished gym floor. Since the junior-senior prom was scheduled to be held in the gym, this caused quite a problem. As the girls put it—no heels, no dance.

In St. Louis, Mo., gallant Robert H. Slosberg of the Silent-Step Division of Missouri Wood Heel Co. read of the problem and rushed eastward with aid. His solution: a heel made with "Adiprene" urethane rubber that fit perfectly on the spikes the girls preferred but, unlike the metal tips, would not damage floors. Slosberg volunteered to make the heels available, free of charge, to any girl in the county wishing to attend the dance. Altogether Slosberg replaced 60 pairs of metal tips with the heels made of synthetic rubber.

We're not exactly sure of the moral to this story, but we're glad things worked out all right. Can you imagine calling off a prom because of a bunch of heels?

other housing is available in the district, this means that teachers will probably still be forced to live in the cottages provided near the school.

Judge rules city building code does not cover schools

An Iowa judge has ruled that city building codes are not applicable to community school districts. Judge Sandoe Jordan issued an injunction restraining the city of Grand Rapids from interfering with the construction of a school within the city limits. At the same time the judge asked that the case be taken to the state supreme court for final adjudication.

In making his ruling Jordan stated that the city clearly had a right to adopt the building code. The question, he stated, was whether it may apply that code to another agency of the state. In effect he ruled that one agency of the state may not regulate another.

Since similar situations, many of them involving city fire codes, occur throughout Iowa and many other states, the issue probably will be put before the state supreme court as the judge suggested.

Student's award refusal stirs national reaction

The refusal of a student in Westbury, N. Y., to accept a citizenship award tendered by the local post of the American Legion, has kicked up quite a storm across the country.

Student Body President Stephen Bayne had already won prizes for

music, science and Spanish when presentation of the Legion award began. The 17-year-old senior rose to his feet and said: "Wait! I refuse to accept an award from an organization whose policies I can't respect."

The immediate reaction was violent. School officials apologized to the Legion commander and faculty members in a hurried conference decided to withhold two more academic awards the youth had won, giving them instead to runners-up. The Legion commander sent a telegram to the boy's home and a spectator at the ceremonies demanded Bayne's expulsion.

The next day, when the smoke had cleared, reaction began to set in. The two students who had received the "second thought" awards, returned them and suggested they be given to Bayne, as originally intended. Editorials and letters appeared in papers around the nation criticizing the school for its actions.

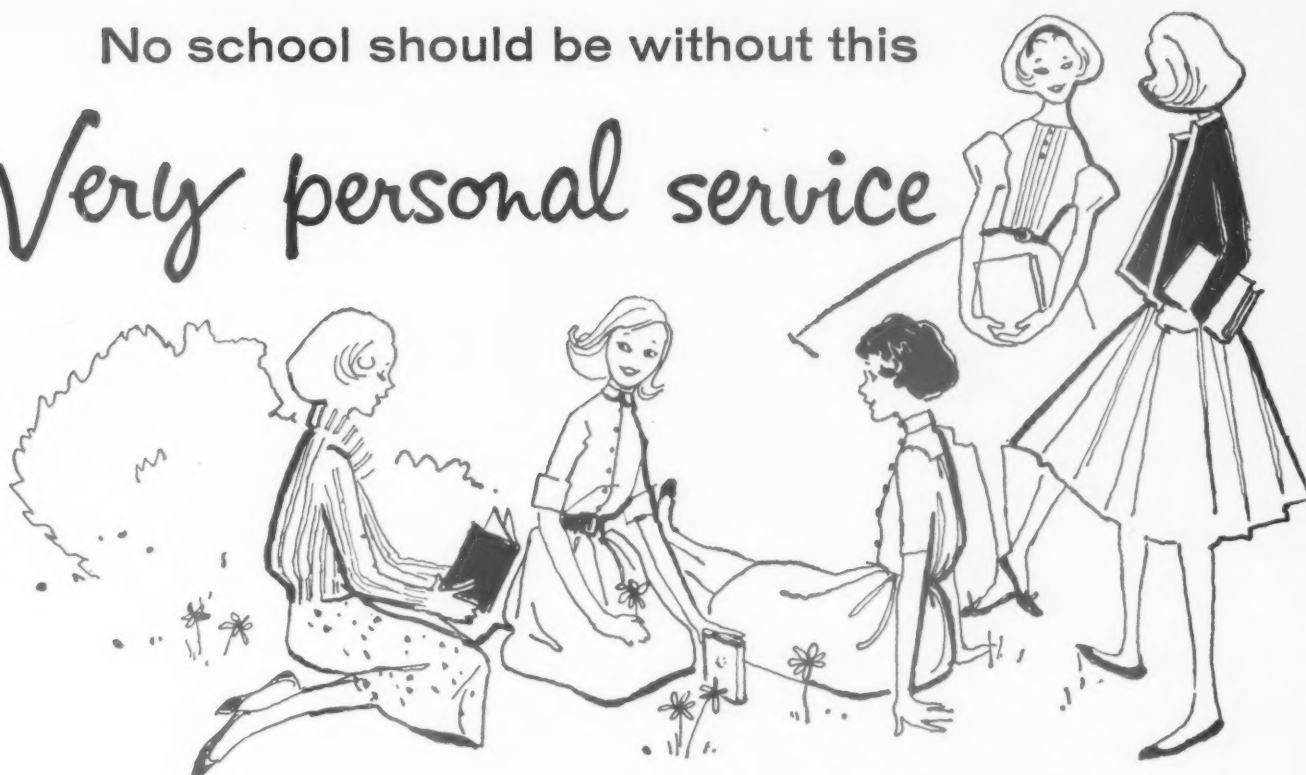
Perhaps the strongest words were written on the editorial page of the *Louisville Courier Journal*, "Timid Teachers, Clearheaded Boys."

The paper called the action of the faculty "a craven performance" and suggested "it is not treason to fail to respect the policies of the Legion. Many Americans, including more than one President of the United States, have failed to respect the policies . . . of that organization."

Commenting further, the paper said, "The wonder is that such teachers had not corrupted the characters of their pupils."

We cite this incident here, not to take sides on who was right and who wrong, but to point out what can happen when a school takes hasty action even on an issue which, on the surface, seems so clearcut.

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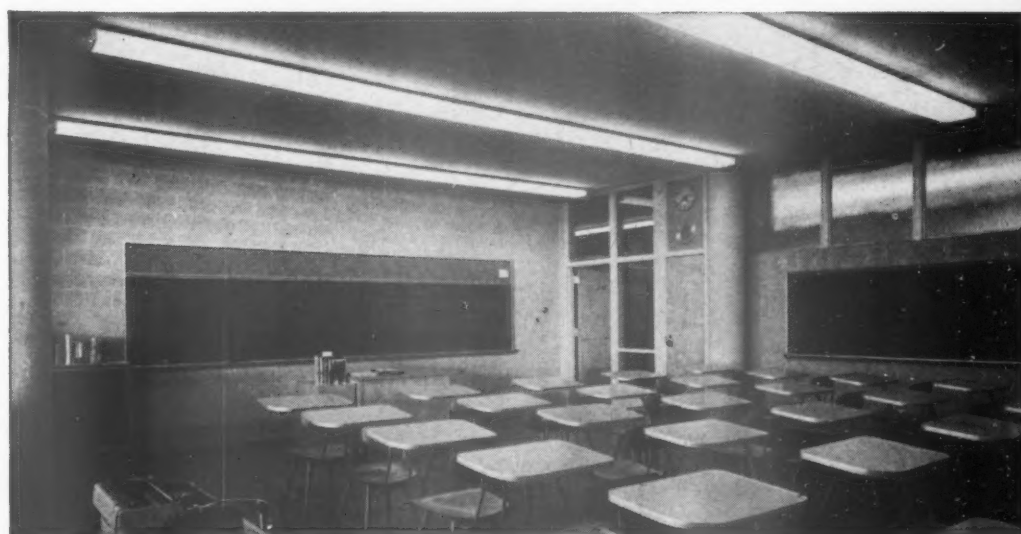
Superb Day-Brite Holiday fixtures maintain a minimum lighting level of 70 footcandles.

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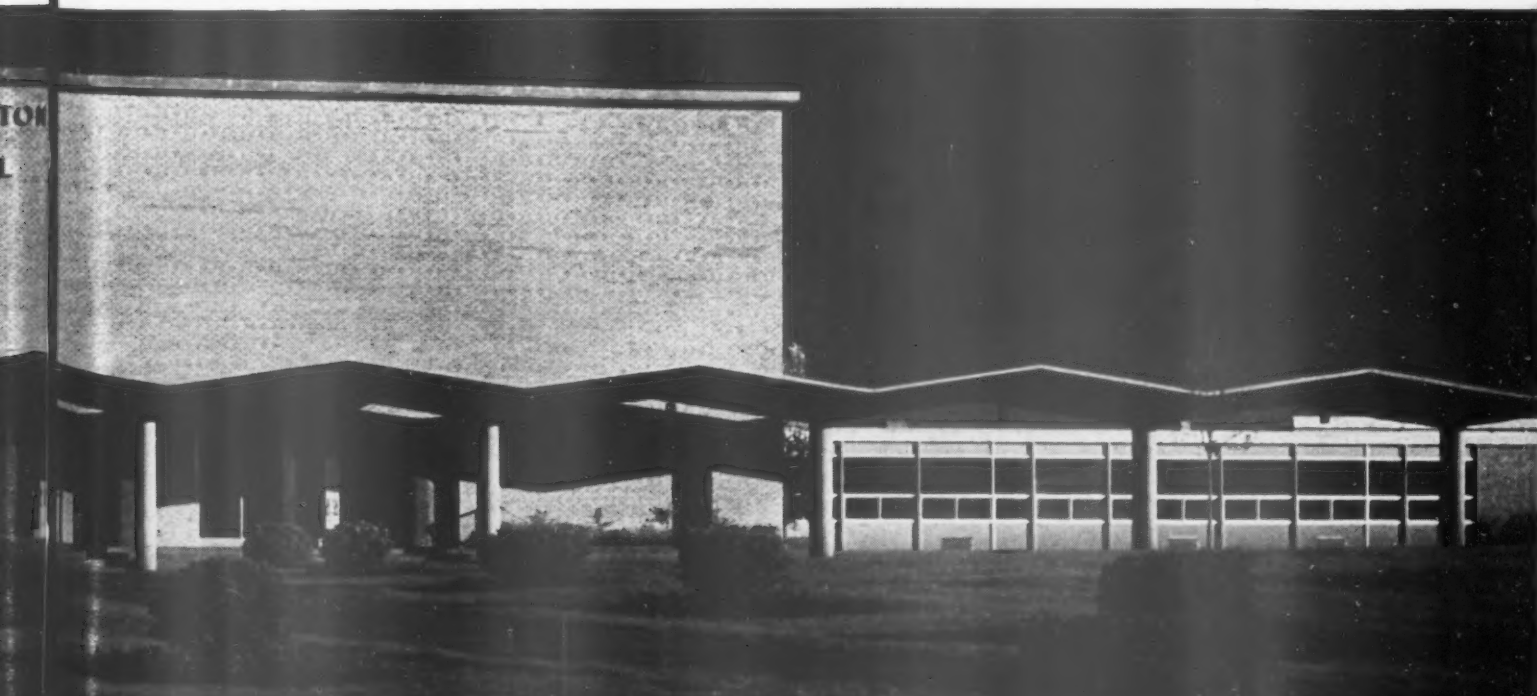
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Consulting Engineer:
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Should your next school be

There's a reason why this more costly "fuel" is gaining wider acceptance. Here are the facts based upon the experiences of two school districts—one in Michigan and one in Pennsylvania.

■ ■ ■ Should you build an electric school? The answer is "no"—unless your district can meet certain conditions. But if these conditions can be met, it may pay you handsomely to consider the advantages electric heating can bring to your district.

What are some of these conditions?

Preferential rate. You can't afford an electric school unless you are able—somehow—to pay less for the electricity you use. Most power companies offer special inducements to volume consumers. But learn all about local regulations covering the special rate situation before taking your first planning step.

Pre-planning. Your decision to investigate an electric school must come before your architect submits building plans. You cannot economically convert conventional building plans to electricity or decide to switch at the construction stage.

Design limitations. Under present conditions, only certain kinds of buildings are suited to go totally electric. If you are keen about campus-cluster layouts or finger plan buildings, forget about all-electric facilities. Consider, too, whether the electric school building plan you ultimately come up with suits your educational program.

Compare. The only way you'll know whether a proposed electric

school will really save you money is to compare it—at every stage of planning—with an equivalent conventional building.

Density. In the well-insulated school, as much as 25% of total heating needs can be drawn from lights and the body heat of students. But this is true only if the building is totally occupied as is the case with most elementary schools. In less densely occupied junior and senior high buildings, this "student-supplied" heat will be considerably less—and electric fuel costs will be higher as a result.

If your district can meet these conditions, you may find two alternatives open to you when you analyze what an all-electric school can offer your district. You can:

- Get more for your school building dollar.
- Build only what you need—and at less cost.

The truth about cost

One major objection to electric schools often expressed by budget-conscious authorities is that they will prove too costly a burden for a district to bear. What are the facts, as evidenced by the experiences of schoolmen with the almost 300 such schools now in operation?

The cost of using electricity as a fuel is higher than other forms of heating energy—oil, gas and coal. But fuel cost alone tells an incomplete and distorted story. To get a

true picture of how electric schools will affect your budget, consider an equally important fact—they are cheaper to construct.

This lower initial construction cost results in immediate savings when you build. More important, it helps ease your long-term indebtedness through lowered interest payments in the future. (This is a prime consideration for the one-quarter of all school districts that are spending about 25% above total current expenditures on debt service and capital outlay—often at the expense of their educational programs. See *"How much can a district pay for debt service and capital outlay?" SM, June '60.*) At the same time, these savings effectively cancel out the higher cost of using electricity as a heating fuel.

This was the experience of the Utica, Mich., school district after operating two new all-electric schools for one year. Officials discovered that they were paying \$1.53 more per pupil as a result of heating electrically. But they also determined that it will take 37 years—about the life expectancy of a school building—before this higher operating cost wipes out the savings they realized from their lower initial construction costs.

Why go electric at all?

But if this delayed cost-equalization were the only advantage offered by the all-electric school, there

electrically heated?

probably wouldn't be one in operation today. Obviously, there must be other factors working in favor of all-electric schools.

In the case of the West Utica and Ewell elementary schools in Utica, Mich., the choice was dictated by the flexibility of electric heating. Superintendent Fred M. Atkinson knew that he would eventually need two 24-room schools, though his immediate needs were less pressing. So the board decided to build in increments to keep pace with the enrollment surge as it developed in the school system.

Architects Smith & Smith, Royal Oak, Mich., designed two 13-room units, built in 1958, to be heated electrically. In addition to the classrooms, each unit contained a multi-purpose room and offices.

As Atkinson explains, when additions were made to the original units in the fall of 1959, "all we had to do to get heat to the 11 additional classrooms was to provide the necessary conduit to supply power to the unit ventilators in each new room. We didn't have to buy a second boiler and burner or spend more money for extensions of ducts, pipes, valves and controls."

In other words, providing more heat for an electric school addition becomes as simple as providing more lights since each room's heating unit is simply tied into the existing heating system. Because of the nature of this system, each classroom's heating needs can be handled independently. Its temperature can be raised or lowered, within reasonable limits, at the discretion of the teacher without affecting the temperature in any other part of the building. In addition, heat can be supplied on demand wherever desired. If a room is to be used after school, it can be kept

comfortably heated by simply flicking a switch—while the rest of the building cools slowly to night temperatures.

Maintenance needs

This push-button control typifies the minimum amount of maintenance required to keep the electrically heated school in operation. Automatic clocks handle the ebb and flow of heat on a 24-hour basis, requiring only occasional inspection and checking out by the custodian. (*For a detailed description of a custodian's duties, see box, page 37.*)

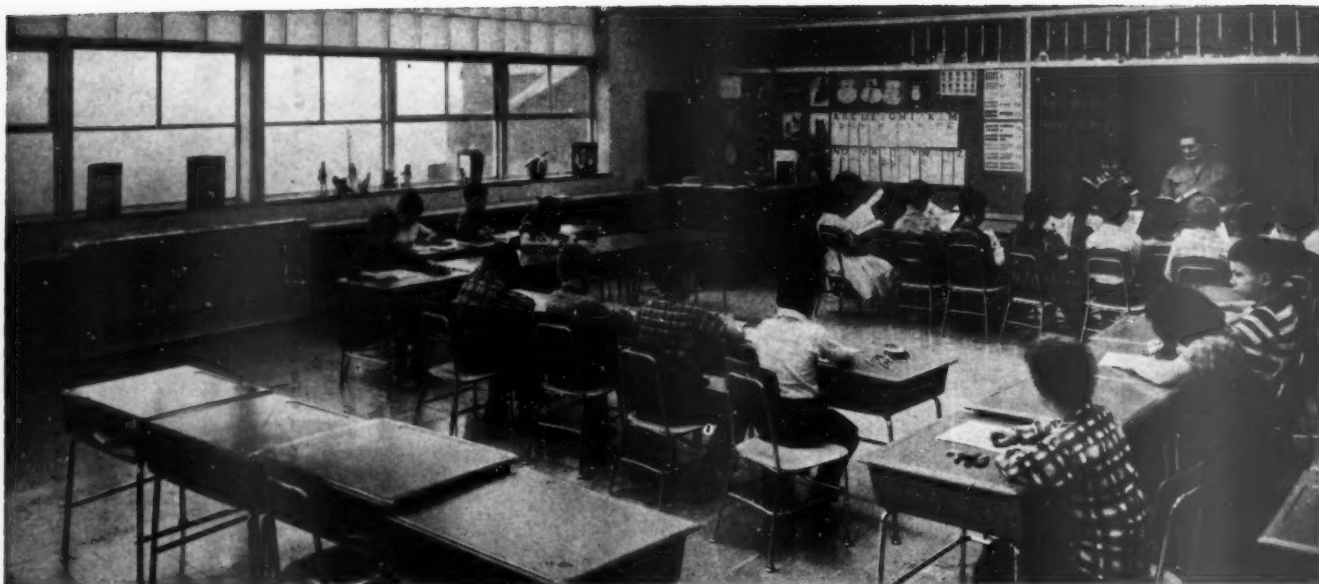
There is no need for elaborate

systems of boiler inspection by highly skilled operating engineers, since no boiler is required. Its counterpart in the all-electric school is the transformer which is normally furnished, installed and maintained by the local power company. In those cases where it is to the school's advantage to own and maintain the transformer, rate concessions are given the school in the basic price structure.

But no matter how the maintenance is arranged in electric schools, boiler rooms are far more expensive and time consuming to maintain than transformers.

Thus, the custodian in the elec-





Electric heating device located in unit ventilator (above, left) supplies heat to this primary classroom in Northern Pike school.

tric school is freed to devote more of his time to other duties around the building. The only real maintenance he is required to perform—besides checking controls—is the occasional oiling of fans and motors and the monthly cleaning of air filters used in classroom unit ventilators.

Is it dependable?

With no central boiler to break down and cut off all heat in the building, the chances of total failure of the entire heating system are extremely slim. In fact, about the only thing that can knock the electric heating plant out is a natural catastrophe which cuts off all power coming into a school. (In such a case, of course, no modern heating system of any kind could continue to operate since they all depend in some way or other upon electric power as an energy source.) If the independent heating unit in a single classroom does cease to function, it does not affect the heating of the rest of the building. It simply stops heating that particular room and can be removed, repaired and replaced without cutting off heat anywhere else.

Because of this versatility, the system can be used to heat only particular sections of a school as re-

quired—for example, the shady side of a building and not the one facing the sun. It provides the amount of heat desired, where needed, at the flick of a switch—with no lag in the generation of heat. Conversely, there is no flow of unwanted heat once the unit has been shut off.

A considerable amount of heat in conventional systems is lost in distribution from the heat source—the boiler—to the point where it is needed. This inefficiency operates in reverse, too. Once a conventional system has been shut off, it continues to supply unwanted heat until the system itself has cooled off sufficiently.

Other considerations

Among the other features of electric heating that might be worth consideration by interested schoolmen are its safety—comparable to that of the electric light, except that no shock hazard is present in heating elements; its cleanliness, both within the building and outside of it, in the community—since no combustion takes place, there are no combustion products in the air; and the variety of heating elements available. These can be perimeter heating units, gravity convectors, radiant panels, ceiling cables, fan-

driven wall insert heaters, unit ventilators, duct heaters—and all can be used within the same building as part of the same heating system.

The advantage of “mixing” heating equipment in this way is that a specific heating need for a given area can be filled more effectively. Thus, in most electric-school classrooms, unit ventilators are used to help get rid of the excess moisture that builds up from the presence of some 30 individuals in a confined area. But outside corridors, rarely crowded except for brief periods, require no humidity-control mechanism. Simple baseboard units, providing only resistance heating, can be used to keep the area comfortable.

But all these features, convenient and efficient though they may be, are probably of secondary importance in any decision to build an electric school. Your major concern when considering one for your own district: What will it contribute to our educational program?

Educational gains

This was foremost in the minds of Utica, Michigan's, schoolmen when they were planning their two new elementary schools in 1958. So they asked architect Neal B. Smith to design two different facilities for

comparison purposes—one all-electric, the other a conventional building. They found that whether they went ahead with hot water heat or electric heat, construction costs would be comparable (*see box, page 38, for a more detailed breakdown of costs*)—with this important difference: Though the electric school would cost \$3,743 more to build, it would provide a total of 13 classrooms instead of only the 12 available in the hot-water heated school which required a boiler room. Thus, the per pupil cost of the electric school would come to \$56 less than the other since it provided space for 30 additional students.

Certain other benefits resulted from Utica's study of electric schools. According to Smith, the first hot-water heated school design was found to be uneconomical for electric heating purposes. "We found we were too spread out with too much exposure and too much exterior wall. In redesigning a second building for electric heat, we discovered a lot of things about economy and efficiency in building design that we have since applied to other non-electric schools in the district." Among them:

- A single unit block or rectangular plan is cheaper and more efficient to run than a finger plan or campus-cluster building.

- Corridors along the outside perimeter wall provide an insulating buffer zone against both heat in summer and cold in winter.

- Complete, adequate insulation is worth its cost in terms of comfort and temperature control.

Says Superintendent Atkinson, "Our electric building is so thoroughly insulated that we have mechanical ventilation through the unit ventilators whether we're heating or not. We're also well protected from direct sun radiation so that it's quite comfortable all summer long."

This insulating factor works the other way around as well, conserving heat during cold weather. "Even at minus 10 degrees outside," says Smith, "we get at least 25% of our heating requirements from the students and from our electric lights. During the day, we're usually only

Daily custodial duties in an all-electric school

In order to find out just what a custodian does in an all-electric school, School Management interviewed Mrs. Margaret Novak, custodian in the Northern Pike elementary school, Monroeville, Pa. Here are Mrs. Novak's answers to SM's questions.



Q. Mrs. Novak, how do you attend to the heating system when you come into the school in the morning?

Novak: Actually, I do very little since the heating system is taken care of automatically and run by clocks. Our school is divided into five heating zones which are handled automatically except during Christmas vacation or during the summer when I turn the switches to "unoccupied."

Q. How do the automatic controls work?

Novak: There are clocks for each zone which are set to come on at different times in the morning and shut off by themselves at the end of the day. Heat comes on for individual zones in the morning at 4:30, 5:00, 5:30, 6:30 and 7:30. At 2:30 p.m., school's out and some zones shut off to night temperatures; at 3:30 when the teachers leave and at 4:30 when the offices close, the rest of the zones shut off.

Q. Suppose you were required to change a time mechanism. Can you take care of that yourself?

Novak: Yes, for that's simply a matter of changing the time on the clock for when you want heat to come on or shut off. In the spring, I move the morning heating period up to a later hour since we don't need so much initial warm-up as we do in the winter.

Q. What about temperature adjustment within each classroom?

Novak: Since the automatic clocks control only maximum and minimum zone temperatures possible during a given time of day, individual adjustments within these general ranges are made by each classroom teacher. For meetings held in rooms after 3:30, we make use of a five-hour clock—which over-rides the control of the main clock—installed in each classroom.

Q. What maintenance duties do you have to perform on the electrical heating equipment?

Novak: All I do is vacuum the filters in the unit ventilators once a month—the front panels simply lift off for easy removal of the filters—and replace them once a year. In addition, I oil all fans and motors twice a year.

Q. What are the temperatures you try to maintain in the building?

Novak: I generally set the automatic controls for 72 degrees during the day in cold weather. At night and on weekends, the temperature is never lower than 60 degrees.

Comparative costs in Utica, Mich.

Before the first 13-classroom all-electric unit was built in Utica, parallel studies of construction and operating costs were made. One study was based on the use of fuel-fired wet heat, the other on the use of electric heat. Here are the results of the studies:

Cost of construction

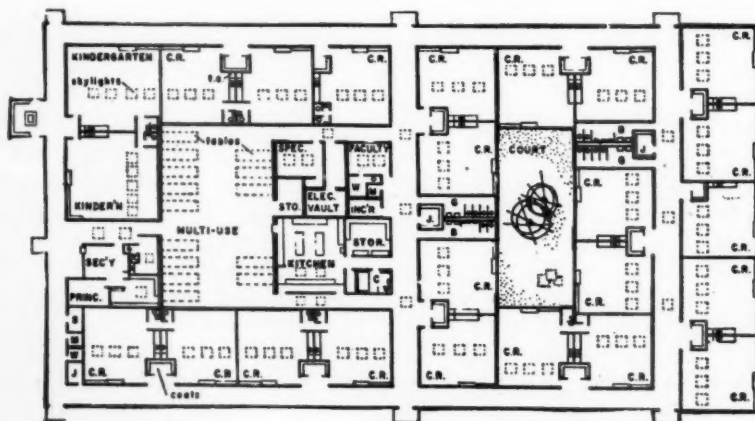
	Hot water heat	Electric heat
Building cost	\$368,044.00	\$371,787.00
Cost per square foot	13.60	13.61
Cost per cubic foot	1.19	1.20
Cost per pupil	920.00	864.00
Capacity (no. of pupils)	400	430

Note: A net saving of \$56 per pupil was attributed to the use of electric heat. In addition, while calculations for electric heat were based upon construction of a 13-room unit, electrical capacity for an eventual 24-room unit was included in the right-hand column figures. The column for hot water heat includes the heating plant for 12 rooms only.

Estimated annual operating cost

	Hot water heat	Electric heat
Fuel oil	\$2,560	---
Electrical energy	2,116	\$10,050
Operational labor—boilers and equipment	1,800	---
Annual maintenance	500	200
Boiler insurance	33	---
LP gas for cooking, water heating, oil burner pilot	760	---
Total	\$7,769	\$10,250
Cost per student per year	\$19.42	\$23.84
4% interest of greater construction cost (\$56 per student)	2.24	---
Depreciation of heating equipment, per student	4.75	4.08
Total	\$26.39	\$27.92

← 1st UNIT → | ← 2nd UNIT →



24 ROOM FLOOR PLAN

ventilating—except for recess when the 'student-supplied' heat is lacking."

One extra feature of all-electric schools, arising from the thorough insulation required to make electric heating economically feasible, is the fact that they can readily be air conditioned. The insulation effectively screens out excessive heat in hot weather and available electric circuits in every room make it easy to plan for air conditioning on a room-by-room basis if desired. This is a particularly important consideration for a district planning to go ahead with air conditioning at some future date when it hopes to have funds available.

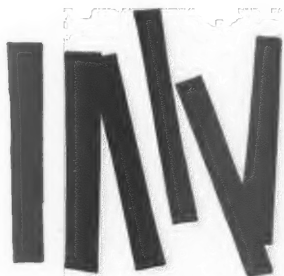
Despite its many advantages, however, the all-electric school cannot be indiscriminately prescribed for every building need. Says Atkinson, "The thing that made electric heating possible in our two elementary schools is the large number of people we have in them per square foot—they're essentially 100% occupied. But if we were to go all-electric in a junior or senior high school building, we'd have only half as many students per square foot. As a result, instead of getting 25% of our heat from people, we might be down to something like 10%. This difference could prove too expensive." In addition, Atkinson feels that secondary school buildings would be less compact with a higher ratio of exterior walls to total square footage, again adding to heating costs.

How to minimize operating costs

Thorough insulation, while an economy measure, is not the only way to keep electric consumption to a minimum. The Utica schools use a number of other means to control the amount of electricity needed to operate them.

Buying at demand rate. Since Michigan's state utility commission forbids power companies to offer special inducements to customers completely serviced by them, Utica schoolmen decided to buy what they needed at an industrial demand rate. In order to qualify under state regulations, they had to buy—and service—their own transformers. This added to the initial construction costs of the two electric schools. But some of the ex-

continued on page 75



Do your schools have paperback bookstores?

Low-cost paperbacks are having a profound effect on the instructional programs of many schools. Here is how these inexpensive teaching aids are being used—and how you can put them to work for you.

■ In Excelsior, Minn., high school, students have bought almost 5,000 paperback books in six months.

■ In Buffalo, N. Y., a paperback bookstore in the South Park High School sold 100 volumes in its first day-and-a-half of operation.

■ In Fairfax County, Va., the Falls Church High School student store racked up sales of 1,100 paperbacks in less than a month.

These are not isolated cases. Similar results have been reported in Michigan, Florida, New York, Illinois, Massachusetts, and other areas of the country. In fact, the student-run store, stocking a wide range of books on a great variety of subjects—all in inexpensive editions—is becoming a permanent part of many school operations.

The effect of paperbacks on the schools that have used them has been phenomenal. In one Connecticut town, a principal looked over some book reports handed in by a class and was amazed by the range of the titles. "But the secret wasn't hard to uncover," he told a *SCHOOL MANAGEMENT* editor. "Every book reviewed had come out in paperback form. We didn't have them all in our

library but the teacher made them available to the students by buying them from a local store. Almost any student here can afford to lay out a quarter or half-dollar for a good book. Using paperbacks makes it

possible for us to really increase the range of reading our students do."

And in Washington, D. C., an athletic director found that paperbacks could make literature available even to the most unlikely stu-



Students at Bethesda-Chevy Chase High School, Montgomery County, Md., choose from a wide range of titles in school's student-run paperback bookstore.

dents. "It doesn't have to be great literature," he pointed out. "Just to have a book, to own one, is an achievement for some of these kids. If I can get a boy to read 'The Babe Ruth Story' or a book about hot rods, it opens up a whole new world for him. He learns about reading. He learns how wonderful it can be. And one day, he's going to move along a shelf and pick out some other book and start reading it. Without paperbacks, it couldn't be done."

What is available?

Books about hot rodding and baseball, of course, form but a minor part of the tremendous range of material now published between paper covers. Included among the nearly 10,000 paperbacks in print today are novels, collections of short stories and verse, biographies, volumes on history, philosophy, archaeology, science, mathematics,

languages—in fact, almost every conceivable subject area that can be presented in print.

Several paperback houses offer the complete works of Shakespeare; Plato, Homer, Plutarch, Cervantes, Conrad, Hawthorne, Dickens, Bronte, Crane, London, Hardy, Cooper, Twain, Melville, Tolstoy, de Tocqueville, Ibsen, Boswell, Stevenson—and scores of other "classic" authors—are well-represented in the publishers' catalogs. Nor have the moderns been overlooked. The list of contemporary writers, teachers, artists, poets, historians, scientists, thinkers, dramatists seems virtually endless. Books by Evelyn Waugh, Faulkner, Rachel Carson, Edith Hamilton, Ruth Benedict, George Orwell, Marchette Chute, John Osborne, Arthur Miller, Maugham, Carl Sandburg, Bruce Catton, C. S. Lewis and others, far too numerous to list, are easily available at paperback bookracks all over the

country. And they are within the financial reach of almost anyone with some loose change in his pocket.

What it means

The significance for you and your schools is clear: Johnny can, will and does read *if* you give him the incentive, the desire and the opportunity to possess good books of his own. To school authorities this has been the single, most gratifying result of the present trend toward paperback bookstores.

The outstanding advantage of paperbacks is the fact that they seem to encourage self-oriented reading among youngsters. The best teacher in the world will admit that this is the critical factor in learning. None of his efforts will really begin to pay off until he has inspired his students to explore a subject further on their own. Paperbacks seem to be providing the needed stimulus.

The reason apparently stems



HIGH SCHOOL BEST SELLERS

In order to uncover what kinds of books appeal to high school youngsters, School Management asked five of the paperback publishers with the liveliest school lists for their 10 best-selling school titles. Here are the books each publisher cited as his most active high school titles.

BANTAM BOOKS

Wonderful World for Children
The Red Pony
All the King's Men
Fifty Great Short Stories
Only Yesterday
The Crucible
Brave New World
French Stories
The Day Lincoln Was Shot
Three Plays

Peter Cardozo
John Steinbeck
Robert Penn Warren
Milton Crane (Editor)
Frederick Lewis Allen
Arthur Miller
Aldous Huxley
(A dual-language book)
Jim Bishop
Thornton Wilder

DELL PUBLISHING

Great American Short Stories
Six Great Modern Short Novels
Kim
David Copperfield (Abridged)
The Turn of the Screw and Daisy Miller
Six Great Modern Plays
Hamlet
Poe
Our Friend the Atom
Everybody's Book of Modern Diet and Nutrition

Wallace and Mary Stegner (Editors)

Rudyard Kipling
Charles Dickens
Henry James

William Shakespeare
Edgar Allan Poe
Heinz Haber
Dr. Elizabeth Munves and Dr. Henrietta Fleck

NEW AMERICAN LIBRARY

The Odyssey
The Iliad
Mythology

Homer (W. H. D. Rouse, Trans.)
Homer (W. H. D. Rouse, Trans.)
Edith Hamilton

from the nature of the books themselves. They are colorful and attractive editions of standard titles, both classic and contemporary—and more “quality” titles are being issued by publishers every day. School bookstores make them easily available to students. And—perhaps most important—they are inexpensive, ranging in price from 25 cents to a general top of 75 cents-95 cents.

All of these factors have played some part in the decisions of many districts to introduce the sale of paperbacks within their schools. But the real reason, in every case where such sales have been tried, has been to encourage and widen the reading habit among the school's youngsters.

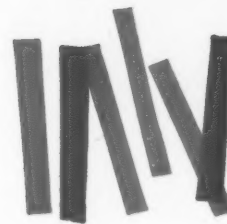
How Minnetonka does it

This was true in Excelsior, Minn., where school authorities decided late last year to introduce the sale

of paperbacks in the Minnetonka High School library. They knew that the fast-growing high school's library collection was inadequate. But they also knew that extra funds for beefing up the collection were simply unavailable. So they did the next best thing. They turned to paperbacks as a means of supplementing the school's library collection. In addition, they hoped to gain three other objectives through paperback sales:

1. Encourage and stimulate broader reading among students.
2. Make it easy for them to begin forming their own personal libraries.
3. Use the proceeds from paperbacks sales to purchase hard-bound books for the library's permanent collection.

Just before Christmas, the high school, and two of the district's junior highs, embarked on a paper-



back retail experiment. The project is well out of the experimental stage now—some 5,000 sales later—and is a permanent part of the program of the district's three secondary schools. Here is the way the high school runs its paperback operation:

Location. A section of the library is devoted to book sales only. Within it, paperbacks are displayed for sale on three large racks set up on a library table.

Sales. Paperbacks are available for purchase on Mondays, Wednesdays and Fridays from 8 a.m. to 4 p.m. The actual selling is done by the school librarian and volunteer student assistants who man the displays on a rotating basis during “store” hours.

Price. Higher-priced books (those over \$1) have limited sales appeal and are not stocked except on special order by a student or faculty member. Prices of the books kept in stock range from 25 cents to \$1.

Selection of titles. Almost everyone concerned with the high school contributes to choosing the actual books to be put on sale in the Minnetonka library. Selection is a cooperative venture in which teachers from all departments, students, the administration, the librarian, and even parents participate. The only ground rules guiding final selection are: a) that the books chosen be of high quality; and b) that the choices preserve a wide selection of titles to appeal to every student.

Purchase of titles. The paperbacks are bought directly from the publisher who ships them, not to the school, but to a nearby distributor. The distributor, in turn, delivers them to the school.

Cost. Except for the time spent by those who handle sales during store hours in the library, the paperback operation costs the school nothing. All books are purchased by the school at a 20% discount and sold to students at list price. (The reason for this is to prevent any possible

continued on page 79

Heart of Darkness and The Secret Sharer
A Documentary History of the U.S.
Good Reading
Intruder in the Dust
Eight Great Tragedies
1984
Animal Farm

POCKET BOOKS

The Scarlet Letter
A Tale of Two Cities
Four Great Tragedies
The Diary of a Young Girl
The Adventures of Huckleberry Finn
The Red Badge of Courage
Roget's Pocket Thesaurus
The Pocket Book of Verse
Microbe Hunters
The Pocket Book of Short Stories

Joseph Conrad
Richard D. Heffner
J. Sherwood Weber (Editor)
William Faulkner
Barnet, Berman & Burto (Editors)
George Orwell
George Orwell

Nathaniel Hawthorne
Charles Dickens
William Shakespeare
Anne Frank
Mark Twain
Stephen Crane

M. E. Speare
Paul de Kruif
M. E. Speare

SCHOLASTIC BOOK SERVICES

The Time Machine
Twixt Twelve and Twenty
Miracle on 34th Street
Sink the Bismarck
Lost Horizon
The Nun's Story
Spanish Dictionary
Third Man on a Mountain
Ben Hur
The Mouse That Roared

H. G. Wells
Pat Boone
Valentine Davies
C. S. Forester
James Hilton
Kathryn Hulme
Castillo and Bond
James Ullman
Lew Wallace
Leonard Wiberly

Have you explored the savings in forms control?

Here's how one district is developing a method that will reduce its bill for printed forms by one-third.

By A. W. MITCHELL and HAROLD S. EVERILL,
Phoenix Union High Schools & College Systems, Ariz.

■ ■ ■ Last June, when we tallied the number of printed forms in use in the seven high schools in our district, we were astonished to find that they totaled 1,600. Included in this figure were many that were essentially the same, produced independently—and at considerable cost—for each of our schools.

The reason for this unnecessary duplication and expense was simple enough. While our system remained small, each school (and we had only three in 1948) operated as a separate entity and took care of its own printing needs. As a result, a great variety of forms was developed at each location to serve the same basic requirements. But, as the district grew, so did the number of forms in use.

By 1959, we decided that the only way to cope with the excessive multiplication of forms was to appoint someone to develop a control system for the entire district.

How to establish controls

Our first task in devising a control system was to gather together all the existing forms in the district and separate them into their various use categories. Next, those forms that were common to more than one school were assembled and a master list compiled which coded each form by number, name and use.

This list was then applied to all the other forms used in the district to determine where overlapping and similarity occurred.

Our second major step was to sort the variety of forms by use. For example, passes—used for many purposes—were gathered and analyzed. We found that though we were using an amazing number of pass forms throughout the system, a large percentage of them were very similar in copy, shape and function. A great many, in fact, were almost identical except for different spacing or over-all size. In addition, each school had its own name printed on the pass forms, making it necessary to print several versions even though content was exactly the same. We decided, therefore, that these forms could be standardized so that a single one could serve many purposes.

This same standardization procedure is now being applied to all district forms used for similar purposes in the various schools. In each case, contents are compared and then combined or revived to develop a single form that serves the needs of all the schools. In most instances, we have tried to discuss the forms with those who use them in order to get their ideas about what constitutes a workable, standardized form.

In order to handle the printing

and warehousing of printed forms, we enlarged the district duplicating department. It now has two offset presses, a mimeograph machine, ditto machine and a variety of other equipment such as a drill, collator, folding machine, cutting machine, etc. The idea is to handle all the printing work possible right in our own shop.

In this department we are presently printing and warehousing 32 standard forms which have replaced more than 300 variations that were in use before. Each form, as it was developed, was given a form number. A catalog, which we hope to issue soon, will list all the forms available from our department by number and function. Eventually, each school in the district will be able to order all its forms, by number, from this catalog.

Immediate results

What results have been accomplished so far with our forms control system?

Here are some examples:

■ Twenty-eight variations of a single call card had been in use in the district—now there is only one. First we eliminated the names of individual schools from the form. Then we did away with particular versions of the form for individual offices and departments within a

school—registrar, principal, dean, counselor, library, etc. Now the user simply checks the appropriate square appearing on the single call form before the name of the office or department concerned. Result: the elimination of 27 unnecessary, additional forms.

■ One schedule form used in Phoenix had eight variations. Each school had at least one of its own with its name imprinted upon it. The only real difference among them was in the listing of six, seven, eight or 10 class hours, depending upon the scheduling arrangement in each particular school. By eliminating the school name and printing the forms with spaces for 10 class hours to accommodate schools needing that number, one form now does the job of eight.

■ In still another instance, we were able to reduce the 50 variations of one general form to four—without hindering the purpose for which the forms were intended.

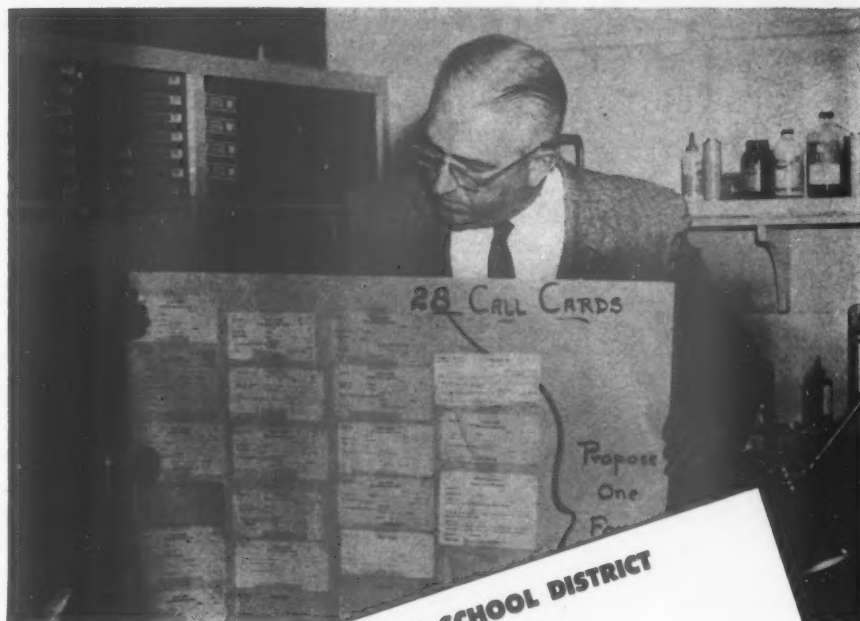
It has not been our purpose to take away a school's individuality by eliminating its name from a particular form. In fact, some of our forms will continue to feature school names. But all the simple forms used within a school will have the unit name deleted in order that one printing can take care of the needs of all the schools in our district.

Anticipated results

We are convinced that much can be accomplished in any district by some kind of forms control, both in terms of efficiency and money saved. It is too early to predict exactly how much we shall save in Phoenix under our new control system, but it

About the authors

A. W. Mitchell is business manager of the Phoenix district. Harold Everill, who had been business manager at one of the high schools, was transferred last year to the district business office where he now functions as forms control analyst.



**PHOENIX UNION HIGH SCHOOL DISTRICT
CALL CARD**

To _____ TEACHER _____ ROOM NO. _____ DATE _____ To _____

Please Send _____ STUDENT NAME _____

PRINCIPAL	REG. OFF.	DEAN'S	COUNSELOR	LIBRARY	HEALTH CENTER	BOOK STORE	NUMBER _____	OTHER _____
-----------	-----------	--------	-----------	---------	---------------	------------	--------------	-------------

IMMEDIATELY ☐ BEGINNING NEXT PERIOD ☐ END NEXT PERIOD ☐

WHEN CONVENIENT ☐

OTHER _____ Left _____

Time Arrived _____ REQUESTED BY _____ VERIFIED BY _____

FORM R-22-50

This single call card replaced the 28 others, shown by Harold Everill in the photograph above.

seems, at present, that the figure will be somewhere between 30% and 40%.

We have already seen the immediate savings resulting from buying some forms in larger quantities—those, such as multiple copy, snap-out, etc., that have to be done by commercial printers. By revising one of these snap-out forms, we were able to place one large order for the entire system at a price of \$5.25 per 1,000 in 50,000 lots, instead of buying in lots of 10,000 at \$14.92 per 1,000.

The purchase price of another form—set by a commercial typesetter—was reduced from \$49 per 1,000 to \$9 per 1,000 by using government surplus paper—which we

had purchased at very low cost—and by using a different printing method. But this particular saving might never have been effected if we hadn't set up a forms control system in the first place.

We believe that a program such as ours could be adopted by other school districts regardless of size. The fact that a given district has no single person qualified to act as a forms control analyst is no drawback. There are any number of business forms companies that will gladly supply this analysis service, free of charge. Once a forms control system is established, it will more than repay the time and effort spent in terms of resulting efficiency and dollars saved for the school system. End



How much do you know about school law?

- Can a school district regulate the outside activities of its students?
- Are school boards immune from liability?
- What constitutes proper and improper use of corporal punishment?
- What are the fiscal rights of an existing school board?
- What are the powers of an individual board member?

Almost every day questions such as these are being argued in courts of law. The decisions arrived at may have only local application. But their possible significance to schoolmen all over the nation often demands that they be carefully studied.

Every official action taken by a school board (or its superintendent, business manager or other authorized employee) carries legal implications for a district. Should an action be taken unofficially, or without authority, the individuals concerned may become personally implicated.

Often, schoolmen don't fully realize their legal rights—and the limitations that have been placed upon them. Some recent examples of the legal consequences which

followed specific school management actions may serve to point up the importance of knowing and understanding school law.

Although the board actions ruled on may have been decided in states other than yours, the decisions, either because of the nature of the case or the prestige of the court, have implications for school boards in every state. As is true of any one court decision, these cases serve only as a general guide. For specific information concerning the relationship of these decisions to your own district, you should consult with your district's attorney or your state board of education.

Five cases have been selected for comment:

1. An Illinois case relating to the injury of a pupil.
2. A Texas case involving student-driven cars.
3. A New York case regarding advertising for bids.
4. A Maine case relating to pupil transportation.
5. A New York case dealing with improper budgetary procedures.

District immunity overruled

THE QUESTION: Are school districts in Illinois to be immune from liability for the wrongful acts or negligence (torts) of their employees or agents?

THE FACTS: An Illinois pupil was permanently injured when the school bus in which he was riding left the road, hit a culvert, and burned. The injured pupil sought judgment against the school district (Kaneland Community Unit Dist. No. 302) in the amount of \$56,000. The district's motion to dismiss the suit—based on the long accepted rule that districts are immune from liability for the wrongful acts (torts) of an employee—was sustained in the trial courts. This appeal was then taken to the Illinois Supreme Court.

THE RULING: In what should prove to be a highly significant decision, the court held that "school districts in Illinois are liable in tort for the negligence of their agents and employees and all prior decisions to the contrary are hereby overruled."

In an explanation of its action in thus overturning the



About the author

Dr. Stephen F. Roach, editor of the *Eastern School Law Review*, is an assistant superintendent in the Jersey City, N. J., public school system.

This article is the first of a series of regular bimonthly law columns which Dr. Roach will write for *SCHOOL MANAGEMENT*. Each will deal with recent court decisions in the field of school law and discuss their implications for districts across the nation.

A local decision in Texas may be cited as the basis for a court action in your own school district. Here is a review of several recent court rulings and summations of their significance to you and your schools.

immunity rule—a rule, incidentally, which is accepted at present in most of the states—the court made the following points: “It is a basic concept . . . today that liability follows negligence, and that . . . corporations are responsible for the negligence of their agents and employees acting in the course of their employment. The doctrine of governmental immunity runs directly counter to that basic concept.

“The whole doctrine of governmental immunity from liability for tort rests upon a rotten foundation. It is almost incredible that in this modern age of comparative sociological enlightenment . . . the various branches of government should be exempt from liability . . . and that the entire burden of damage resulting from the wrongful acts of the government should be imposed upon the single individual who suffers the injury, rather than distributed among the entire community constituting the government, where it could be borne without hardship upon any individual and where it justly belongs.

“We believe the abolition of such immunity may tend to decrease . . . school accidents . . . since districts will be encouraged to exercise greater care . . . and also carry adequate insurance . . . thus spreading the risk of accident, just as other costs of education are spread over the entire district.

“We conclude that the rule of school district tort immunity is unjust, unsupported by any valid reason, and has no rightful place in modern day society.”

Therewith the trial court ruling denying the injured pupil's claim was reversed and the case returned to it for a new hearing to determine the amount of damages to be assessed against the district.

Molitor v. Kaneland Community Unit Dist. No. 302. In Illinois Supreme Court; decided Dec. 16, 1959; cited as 163 N.E. 2d 89, 18 Ill. 2d 11.

SIGNIFICANCE: In general, the significance of each of the examples cited, appears in the words of the individual rulings. In this case, however, two additional comments are particularly pertinent:

■ The reasoning upon which this decision was based is indeed persuasive and, under similar circumstances, may well be accepted and applied in other states where—as was the case in Illinois—the immunity rule has long been accepted.

■ Because of the explosive implications which might follow a similar reversal elsewhere, school district officials in those states where the “immunity rule” is still presumed to apply might profitably restudy the adequacy of their present liability insurance program.

Student driving

THE QUESTION: May a board prohibit high school pupils from driving their autos during the lunch period?

THE FACTS: A Texas school board decided that high school pupils driving automobiles to school were to park them in the school parking lot and were not to move them until 3:45 p.m. without special permission.

The school authorities testified that prior to the resolution, between 50 and 60 autos would be driven from the lot at the noon lunch hour. Since a grade school (with about 350 children) and a playground were both in the immediate vicinity of the high school, a hazardous traffic problem had been created by the simultaneous noontime exodus of the autos and the elementary grade children. It was also established that on occasion some of the cars had been driven recklessly on the streets near the high school.

Suit was brought questioning the board's authority to promulgate the resolution. In the trial court it was held that the board was not empowered to adopt the resolution in question. This appeal followed.

THE RULING: The Texas Court of Civil Appeals ruled that the board's action in adopting the questioned resolution was both lawful and proper.

“The courts . . . have consistently upheld the actions of school authorities in promulgating rules to insure proper conduct and decorum of the students for the government of the schools as a whole where such rules

have not shown a clear abuse of power and discretion or a violation of law."

The court rejected the contention that the board had exceeded its discretionary authority by promulgating a regulation—the one here being questioned—which attempted to control "the use of public streets and highways." The purpose of the regulation in question, said the court, was to control "the conduct of the students" to the end that student pedestrians on the streets adjacent to the schools might be safe from student operated automobiles and that better order, decorum and discipline might prevail at the noon recess. "We do not believe they abused their discretion in so doing."

McLean Independent School Dist. et al. v. Andrews et al. In Texas Court of Civil Appeals; decided March 14, 1960; cited as 333 S. W. 2d 886.

Advertising for bids

THE QUESTION: Must a school board "advertise for bids" where it determines that one of the two probable bidders is not qualified to bid?

THE FACTS: Sections of the applicable statutes provided for the award of school district contracts involving expenditures of more than \$2,500 after "advertisement for bids."

By resolution—but without any advertisement being made for bids—the Lackawanna City, N. Y., school board awarded contracts (for the printing and publishing of its official minutes and legal notices) to the publisher of the *Lackawanna Leader*, a local newspaper.

Thereupon the owner of *The Front Page*, a publication also doing business in Lackawanna, brought suit maintaining that the contracts violated the statutes requiring advertisement for bids. *The Front Page*, which had been published for only three or four weeks, was circulated free of charge and had not been classified as a "newspaper" by Post Office authorities.

THE RULING: The contracts would have to be set aside since they had not been properly advertised, as was required by the statute.

The board of education had contended that: 1) the respective owners of the *Leader* and *The Front Page* would be the only ones interested in submitting bids on the printing work in question; 2) in the opinion of the board the owner of *The Front Page* was not qualified; and therefore 3) it was not practical to advertise for bids since only the *Leader* would submit a bid.

In rejecting this contention the court held: "The proper advertising for bids and the letting of contracts . . . is a matter of public interest." Hence compliance with the "advertisement" statutes was mandatory.

The court made one other comment of significance: "However, it is not provided in the . . . statutes that the advertisement for bids must be done in a newspaper. Doubtless, the advertising . . . could be done with equal validity in the eyes of the law by the use of instrumentalities other than newspapers . . . viz., by handbills, . . . by oral proclamation . . . or by . . . placards, etc."

McDonough v. Bd. of Education of Lackawanna City School Dist. In New York Supreme Court; decided Aug. 6, 1959; cited as 189 N. Y. S. 2d 401, 20 Misc. 2d 98.

Transportation to private schools

THE QUESTION: Does a city council have the authority, as a part of its "police power," to enact an ordinance providing for the transportation of pupils to and from non-public schools?

THE FACTS: The City Council of Augusta, Me., passed an ordinance making "conveyance by motor vehicle" available to children who attended non-public elementary schools pursuant to the compulsory school-attendance laws and who resided more than one mile from such schools.

By the same ordinance, funds were appropriated from the city's contingent fund to provide for this transportation.

Suit was brought to test the legality of the ordinance and appropriation order.

Both parties to the suit agreed that the state legislature had not, either by charter or statute, given to the City of Augusta express authority to pass the ordinance at issue. However, the city council contended that it had the authority to enact both the ordinance and the appropriation order, "as an exercise of its police power," i.e., in order to conserve the health, safety and welfare of the community children involved.

THE RULING: The city council was without authority to enact the ordinance, and the proposed expenditure of public funds would be unlawful, according to the state's Supreme Judicial Court.

To explain its ruling the court made these points:

1. The legislature did not intend for any municipality to regulate by ordinance or order, any subjects which would affect or influence general education unless permitted to do so by an express delegation of power.

2. "The legislature has seen fit to make the conveyance of pupils . . . a component part of the public school program. . . ."

3. The city council was here attempting to accomplish by police power what it was not authorized to do by its charter or any enabling legislative act, namely to transport pupils to private schools. Such a use of police power "is repugnant to . . . the established policy of the state . . . plan for . . . education."

In its comments the court made one other highly significant point: "In . . . the case at bar, we do not reach the issue of . . . constitutionality. . . . We are satisfied that a properly worded enabling act, authorizing municipalities to expend funds for the transportation of children to private schools, not operated for profit, if one were in fact to be enacted by the legislature, would meet constitutional requirements."

Squires et al. v. Inhabitants of City of Augusta et al. In Maine Supreme Judicial Court; decided May 25, 1960; cited as 153 A2d 80, 155 Me. 151.

SIGNIFICANCE: Although the matter of public transportation of private and parochial school students has not yet been finally decided (a Connecticut case is currently being prepared for presentation to the U. S. Supreme Court), certain patterns of great significance have emerged from rulings in this field.

Courts (most recently the Connecticut Supreme Court)

continued on page 78

How to free teachers from student absence accounting

The more time teachers spend on student absence records, the less time they teach. Here's how an Idaho high school relieves its teachers of this record-keeping chore—without parent-signed excuses.

By PERCY BURRUP
Brigham Young University

■ ■ ■ Most teachers and school administrators are unhappy with the prevailing method of student absence accounting. Teachers don't like it because much of the responsibility for the system rests with them, requiring expenditure of classroom time on recordkeeping. Administrators object to the excessive red tape involved, the encouragement to dishonesty in parent-signed excuses and the time lag between absence and the presentation of an excuse for it.

To this group should be added students and their parents. They object to the waste of time entailed in getting a youngster excused for an absence. Some of them object even more to the insinuation, built into the absence record system, that adolescent youngsters are not to be trusted to account for their own absences.

New method developed

Some authorities in a high school in southern Idaho, dissatisfied with their method of absence accounting,

decided to try to develop a new system. The simplified method they devised was begun on a trial basis under the direction of the principal as the attendance officer.

Although the new system was not unique—necessary forms could be obtained easily from some school supply houses—it was different in one major respect: Teachers were relieved of much of the time-consuming detail of the program without increasing the time and effort required to administer it.

How the plan works

In adopting the new plan, three basic assumptions were made:

1. Child-accounting, including the keeping of absence records and reports, is primarily a responsibility of administrators, not teachers.
 2. Since the teacher is employed to teach students, he should be involved as little as possible in absence accounting.
 3. The plan should be simple and free from red tape.
- Here is an example of how stu-

DAILY REPORT OF ABSENTEES

Day of Week Monday Date May 23

	PERIODS							
	1	2	3	4	5	6	7	8
<u>Doe, John</u>	/							
<u>Jones, Mary</u>							/	
<u>Smith, Tom</u>	/							/
<u>Alise White</u> , Teacher								

Extent of teacher's recordkeeping is submission of a daily absence report.

ABSENTEE LIST

Date May 23

Allen, Mary
Brown, Shirley
Doe, John
Jones, Mary
Smith, Tom
Thomas, John

School-wide absentee list is compiled from absence reports of all teachers.

dent absence is handled under the system.

Assume that John Doe was absent from school all day today for a legitimate reason, that Mary Jones was absent during the sixth and seventh periods because of illness contracted while at school, and that Tom Smith was absent all day for reasons that are not excusable. Also, assume that all three are in the first period class of Miss White, the English teacher, and that Tom Smith and Mary Jones are also in her seventh period class.

At the end of the school day, when the office secretary collects the absence report of Miss White, it will look something like the form on page 47.

After all the daily reports of absentees are collected from the teachers by the office secretary, a composite list, or office daily

absentee summary, is prepared. This, of course, includes the absences and other attendance violations of all students for all purposes for the day.

From the office daily absentee summary list, the secretary types a number of copies (absentee lists) which simply list the names of all students reported by all teachers as having been guilty of attendance violation—no matter what the reasons might be. Copies are placed on the bulletin boards in conspicuous places and a copy is made for each teacher of a homeroom. (See sample absentee list, left.)

As Miss White goes to her homeroom for the first period tomorrow, she will note that John Doe, Mary Jones, and Tom Smith—all from her room—are on the absentee list.

If one of her students on the list is still absent she will simply mark an "x" next to the name and report the absence again on her daily absence report for that day.

Any students on the absentee list are required to go to the attendance office to get a student admit slip before being allowed to attend first period class. The students secure from the office secretary their individual cumulative absence record card (usually a five-by-eight inch card of heavy construction). On it they fill out and sign the next line on their record (see sample "Cumulative Absence Record," below, at right).

(Note that the cumulative absence record provides a complete account of the student's absence during the entire year, together with his signature for each absence.) Since the

record is signed in the presence of the office secretary, there is never any question about forged signatures.

As each of the students fills out the cumulative absence record and signs it, he or she is given a secretary-signed student admit slip (see form, below, at left).

Since the teachers do not need to evaluate the reason for absence, the homeroom teacher will simply check John Doe off her absentee list and destroy the student admit slip. Her responsibility—to see that the student has accounted for his absence in the office—will thus have been discharged and she is then free to begin her classroom duties. If the student on her list does not come to homeroom, his name is carried on the absentee list until he does report with an office-signed excuse.

Meanwhile—back at the office—the secretary has either refiled the individual cumulative absentee records or she has presented them to the attendance officer for study and followup if this is necessary. This procedure provides ample opportunity for the latter to hold conferences with parents or students or both when there is suspicion that absence has not been for legitimately excusable reasons. This can be done as soon as the admit slips have been issued and does not necessitate waiting for parent-signed excuses which often require a much longer period of time before they can be cleared. In cases of obvious truancy, the attendance officer has the information he needs right at hand. The student can be checked even before he is officially in school the

Returning students get admit slip from attendance office after filling in required information on cumulative absence record.

STUDENT ADMIT SLIP

Date May 24

Admit John Doe

Who was absent: Period(s) 1 2 3 4 5 6 7 8
All day

Reason Attending a funeral

(or) Blanche Avery, Principal
Secretary

CUMULATIVE ABSENCE RECORD			
Doe, John		School Year - 1959-1960	
Date	Date(s) Absent	Reason	Signature
Oct. 3	Oct. 1, 2	Illness	John Doe
Mar. 1	Feb. 28 (a.m.)	Work at home	John Doe
May 24	May 23	Attending funeral	John Doe

day after his violation. The value of such dispatch in checking the occasional trancies found in secondary schools is obvious.

Another value of the system is inherent in the cumulative absence records. The school secretary can quickly post the attendance record usually required by law or state board of education regulation for purposes of determining allocation of state funds. Since the records are in the office, individual teachers do not have to concern themselves with this problem—an obvious advantage to them, and at the same time, a guarantee of consistency and accuracy in school attendance reporting.

Advantages of the plan

Among the advantages of this plan of accounting for student absences are these:

1. Virtual release of the teacher from most of the administrative detail involved in evaluating excuses. Release, too, from the useless and ineffective signing of excuse forms both from the office and from the parent (or his "reasonable" substitute in many instances).

2. Much time and red tape is saved by this effective procedure. Only one or two periods of the day are concerned with the clerical mechanics involved in the administration of the program.

3. The student knows that he alone is responsible for his absence accounting and that a personal and cumulative record is on file. Since he signed it himself, the file is incontrovertible evidence of his attendance conduct.

4. The individual record becomes a valuable bit of information for use in conference between principal and parent—and student.

5. The real temptation formerly experienced by a youth in attendance trouble—to get someone else to sign his absence excuse in place of his parent—has been eliminated.

6. The parent no longer need "defend" his child when the latter has been absent for questionable reasons—the student must now defend himself.

7. Violations can often be detected immediately and without the loss of time which accompanies waiting until reluctant students bring some manner of "parent-signed" excuses to the school.

The most important value of all those inherent in this system, though, is the development of a feeling of responsibility in the students themselves.

Where the plan can be used

The principles involved in this plan are much the same under every kind of school organization—quick, accurate reporting; lack of red tape in administration; student responsibility for his own conduct; and administrative rather than teacher responsibility for attendance ac-

counting. The details, of course, can be varied to meet the size of the school and the prevailing administrative technique.

Like any other practical program in education, the system will sell itself if given the opportunity. It is not expensive to operate—standard forms are available at school supply houses at very low cost. It is simple to understand. And it can be operated largely through the efforts of capable secretaries under the expert direction of a school administrator or his representative. **End**

How **DUDLEY** gives you the best in Combination Locker Locks



P-570

Master-Keyed Combination Padlock

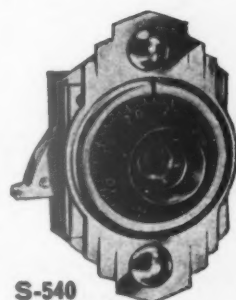
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*Slim, attractive units save classroom space, provide
ideal comfort conditions for any school, any climate*

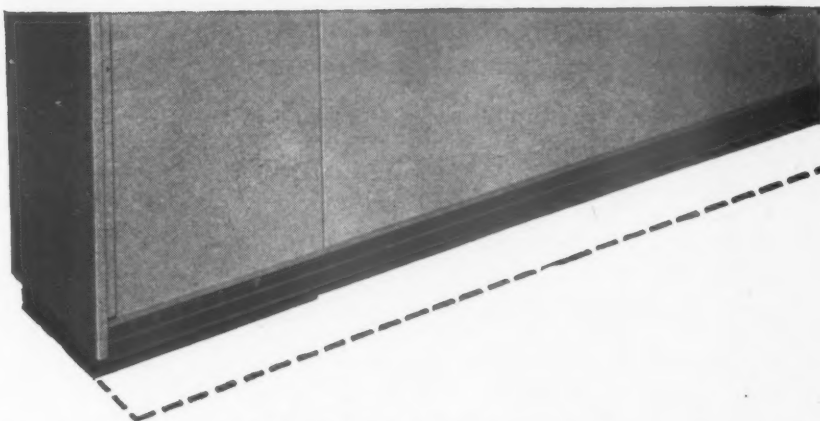
NOW there's a TRANE Unit Ventilator to meet the requirements of any school, in any climate. New, more compact units are available with complete, year-around air conditioning—in addition to heating-ventilating. Air conditioning may be included when the system is installed—or added later easily, economically without classroom alterations.

These new TRANE units provide extra classroom space. Their trim, modern lines com-

plement modern school design. And optional shelving provides convenient storage space for books and teaching aids.

How important is complete air conditioning to the modern school? More and more school planning is taking air conditioning into consideration. It offers the opportunity to utilize school facilities during warm summer months. And it can extend school use to civic and municipal purposes. Now TRANE—the people

Provides more usable classroom space! The new TRANE Unit Ventilator is 21% thinner than other makes of heating units . . . 29% thinner than other makes of heating-air conditioning units. (Other units are as much as 16 $\frac{5}{8}$ " deep.) You can save as much as 14 sq. ft. of space in every classroom!



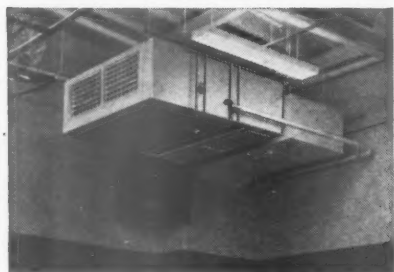
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EXPLORATIONS

IN

EDUCATION

**On evening study halls
for high school students**

On regrouping elementary classes

On differentiated grading

The following case histories were submitted by readers in districts where schools are better utilizing staff, space or time. They are presented as part of a joint project with the Teacher Education Committee of the Massachusetts Association of School Committees.

EVENING STUDY HALLS FOR HIGH SCHOOL ENRICHMENT

TODAY, EVERYONE IS vitally conscious of the swing in education toward an enrichment program of some sort. Ordinarily, this implies pressure for more subject-matter courses in the curriculum. Contrary to this accepted line of action, the Monahans-Wickett schools, Monahans, Tex., have decided to enrich their already established junior and senior high school programs by attempting to assist the students in learning how to study and how to do it more *thoroughly*. To accomplish this objective, night study halls have been set up.

Early last spring, the program was presented to our school board for its approval. The board authorized the opening of four study halls in the high school and two in the junior high school for two nights each week. Hours were from 6:30 until 9:30. The halls were to be used for study in specified subject-matter fields.

In the high school, study halls were set up for English and library work, science, mathematics and social studies. In the junior high school the fields covered were English and mathematics. As students reported to study hall, they were required to fill out an attendance slip. The student's name, the study hall classification and the hour of arrival were entered. Upon leaving, the same attendance slip was signed by the instructor in charge who filled in the time of departure. The student was given the original copy to take home and the carbon was kept on file at the school. This gave both the parents and the school a check on the student's use of time.

What statistics were compiled while the study halls were in operation are interesting. The high school had an enrollment of about 400 students. Attendance at the night study halls averaged from 150 to 200 students per night. Naturally, assignments, outside activities and school events affected the over-all picture from time to time.

Contrary to what might be thought, it is our students

who are most enthusiastic about the program. From their candid comments we know that they appreciated the quiet atmosphere for study and the availability of teachers and resources to help them. What greater success could we ask than this?

Our philosophy of enrichment does not aim to spread our energies more widely but rather to marshal our resources for a more thorough teaching of the job at hand.

Reported by Superintendent Wesley N. Martin, Monahans-Wickett Independent School District, Monahans, Tex.

ELEMENTARY CLASSES REGROUPED TO PROVIDE GREATER CONTACT

IT IS THE PRACTICE at Pelham, N. Y.'s, Colonial elementary school to shift children from one class to another periodically.

Students are redistributed at the completion of kindergarten, and grades two and four. The main reason for class redistribution is so that each child has contact with as many other children as possible on the same grade level before attending junior high school.

The method of redistributing the students into balanced groups is a three-step process. The first step involves ranking each child numerically in regard to his:

- a) general ability and over-all standing in the group;
- b) IQ score;
- c) reading score.

To complete step one, the teacher makes notations if attention should be paid to class placement for particular reasons such as: a leader, good follower, within a clique, too close an attachment to one child to the exclusion of all others, behavior problems, withdrawn, overactive, speaks a foreign language, a twin or

text continued on page 54

Editor's note: Explorations in Education has dealt in the past almost exclusively with ways in which school districts were improving their curriculums or other procedures directly involving students (such as report cards and grading).

But even old-hat "innovations" in a school program demand new training of teachers. The following are descriptions of four programs that have been instituted in different school systems to aid teachers in improving the present curriculum or adding to it.

IMPROVE ELEMENTARY SCIENCE

TEACHER-LED SCIENCE WORKSHOPS are scheduled to be held this September in the Roselle, Ill., elementary schools in an effort to improve instruction in that subject.

The program, which was planned last winter, is the result of a term's study under Title III of the NDEA.

Teachers taking part in science workshops under the NDEA program last spring, planned together a similar presentation to be given to their fellow-teachers during the first few weeks of school this fall.

Emphasis of the teacher-led school workshops will be placed on presentation of science materials to elementary school children. Teachers will be instructed in setting up apparatus, conducting experiments and using equipment properly.

The object of the sessions will be to give teachers confidence to make full use of available science materials. Administrators in the district will also be required to attend the workshop sessions in order to improve their own understanding of the subject.

Reported by Theodore T. Kane, assistant superintendent, #54 Schaumburg School, Roselle, Ill.

WORKSHOPS ON LOCAL HISTORY

WHAT CAN A DISTRICT do to improve its teaching of local history and government, when the majority of its teachers are themselves from other areas? This problem was successfully tackled in St. Paul, Minn., when the district accepted a teacher request to institute a workshop in local government and history.

More than 80 teachers volunteered to study such subjects as the geographical, geological, ethnic, economic, governmental, cultural, sociological and historical factors that influenced the growth of the St. Paul area.

At the conclusion of the workshop sessions, a special committee was formed to collect instructional materials, units and supplementary reading sources to be made available to any teacher whose class was going to study St. Paul. With a continuing program of workshops and materials collection on local history and customs, the St. Paul schools will never again find themselves without adequately prepared teachers in this most important subject.

Reported by Warren Panushka, curriculum supervisor, St. Paul public schools, St. Paul, Minn.

TEACHER STUDY OF CURRICULUM

WHEN TEACHERS in the elementary and high schools of Edwardsburg, Mich., decided to take a critical look at the curriculum they were offering, with an eye towards better coordination of the program, they soon discovered that they could go only so far before needing outside professional help.

This help was provided by members of the faculty of Western Michigan University who undertook to teach a course in "curriculum improvement."

Rather than ask teachers to attend this course on their own during after-school hours, the board of education approved a schedule calling for released time one afternoon a month so that teachers could attend the sessions.

Once a month, during the entire 1959-60 school year, students were dismissed at noon. Teachers then attended the curriculum improvement course during that afternoon and evening. Fees for the participating teachers were paid by the board.

"Teachers received college credit," says Superintendent Dan McConnell, "but they were even more impressed by the interest their board of education placed in them and the total school program."

Reported by Superintendent Dan McConnell, Edwardsburg Consolidated Schools, Edwardsburg, Mich.

ELEMENTARY SPANISH TEACHERS

OUR SCHOOL SYSTEM was faced with the problem of how to secure competent and qualified teachers for the program in elementary school Spanish which the system had inaugurated. Several ways of overcoming the problem were considered. One of these was the hiring of specialists in the field who would go from school to school to teach the language for a brief period each day. Another was the use of television which would enable one teacher to reach all the students in the system at one time. However, for various reasons, these possibilities were discarded and the decision was made that the regular classroom teachers should take the responsibility for teaching the language.

We faced a problem here by reason of the fact that many of our classroom teachers had had no formal training in Spanish or in the techniques of teaching a foreign language. After careful consideration of ways by which this handicap might be overcome, we turned to the department of foreign languages at the University of Tennessee for assistance. As a result, a member of the staff of the university is meeting with a group of our elementary teachers for three hours each week for the purpose of helping them improve their competencies in the Spanish language and in the techniques of teaching it.

We feel we have found the answer to our problem and think that the best way to secure teachers in the various fields is to train them yourself.

Reported by Superintendent Archie Dykes, Greeneville City Schools, Greeneville, Tenn.

cousin, personality conflict with a particular child, special handicaps physically, socially or academically

Step two involves making class groups based upon the mathematical rank scores. To have an economical balance for instructional grouping purposes, a pattern of skimming off the extreme top and bottom and placing them in separate groups has become the practice. We find that this practice allows the very children to be stimulated by children of like ability and not stand out as intellectual misfits. These same benefits are afforded the child at the other end of the scale. In both cases, the children have the feeling of belonging to a group like any other normal child.

We have not established an arbitrary percentage or number of children to be considered Top and Low because each year the complexion of the group is different. Some years there is no obvious extreme, therefore this factor is not to be used.

Basically the criteria used in redistribution are a balance of boys and girls; new students and old; class size; academic ability; social characteristics; and creative ability.

Since step two is based more or less mathematically and on a cold objective basis, step three attempts to give a final check and temper the arbitrary decision. The teachers are asked to review the new class lists and note any gross errors. Changes are made according to their recommendations.

It is easy to say you can shift children from one class to another whenever it is necessary but too frequently it seems to parents and children that it is done because someone is "bad." By shifting whole groups periodically, you are able to accomplish the particular shift you think necessary without any stigma whatsoever. Also, by this periodic reshuffling, we feel children are observed, evaluated, and given more opportunities to establish new patterns. There is not as much chance of a child having a poor reputation follow him throughout his school career.

Chances to make new friends is another factor. By

the time the children enter junior high school, they have met practically all the children of their own age at their own school. This means they begin a new school experience without having to adjust to too many new faces.

Reported by Margaret E. Hieronymus, Principal, Colonial School, Pelham, N. Y.

DIFFERENTIATED GRADE POINT IMPROVES GRADING SYSTEM

TWO RECOGNIZED problems of most existing reporting systems have prompted development of a new grading system by members of the Spirit Lake Iowa high school faculty. One of these problems was the difficulty in getting students to elect courses commensurate with their ability because of the "common" grading system. The other deficiency of the grading system was its inability to justify differing expectations of sections of varying abilities within classes.

As a result of a study group's work, next year there will be a differentiated grade point used with certain classes carrying, for want of a better term, an "X" designation. The breakdown of grade point assignments are as follows:

"X" courses

A - 5.0

B - 4.0

C - 3.0

D - 2.0

F - 0.

General courses

A - 4.0

B - 3.0

C - 2.0

D - 1.0

F - 0.

It is expected that the "X" designated courses will be those stiffer, more academic courses. Attempts to get sufficient enrollment for them in the past have met with resistance. Also, a section of students with the highest ability level in world history, for example, could receive the "X" designation. With this group, one would expect that the teacher would operate on a much higher level

Here's what we're doing in our district

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than with a group of varying abilities; one would further expect a great deal more reading of books related to this area, more research, more individual responsibility for learning, and, obviously, more retention when evaluated. Students who do meet these increased expectations from their instructor will hereafter receive grades with their meaning annotated.

The study group set up rather specific requirements which need to be met before a course receives the "X" designation. These include:

1. Prerequisite requirement—both in terms of past achievement and aptitude of members of the class, and in terms of prior courses.
2. Homework regularly required—a minimum of half an hour.
3. Evidence of requirements which vary from other groups of the same subject.
4. Teacher request for "X" designation to faculty committee.

Hereafter, names of honor students will be reported using the grade point system, and the number grade will be eliminated. The "X" will appear in the register, personal folder, and on the student's permanent record. The designation will also then subsequently appear on transcripts sent out to colleges or prospective employers. The differentiation will be explained on a statement accompanying the transcript. We feel that this grading system will eliminate many objections now expressed towards taking "tougher" courses.

Reported by Principal Gordon Calwelti, Spirit Lake high school, Spirit Lake, Iowa.

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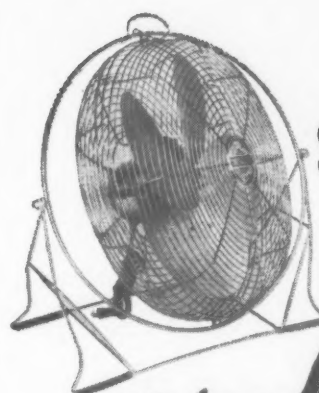
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This school district developed personal grouping cards for each student to speed the reorganizing of elementary school classes each spring.

■ ■ ■ If your schools are plagued by the problem of organizing new classes each year—and few schools aren't—you may find a solution to your problems in the grouping cards we developed in Plainedge, N. Y.

These five- by eight-inch cards (see illustrations), which are printed in our own high school shop, are used during elementary school grade level meetings to place students quickly and easily in the proper sections of each grade.

Each card contains the name, address and telephone number of a single child. In addition, the birth date, sex, and brothers and sisters of the student are listed. A card is filled out for each child when he enters the Plainedge school system and remains on permanent record.

In addition to the standard information described above, each year the child's current teacher fills out other information requested on the card. This is done before the grade level meetings at which student placements are made.

The teacher fills out the number of the grade the student is completing, her own name and the approved reading level the student has reached. Under a section titled "general achievement level," she is able to include any other pertinent academic information. This can be done simply by checking the appropriate box (high, average or low), or by writing in specific information (see example).

On the reverse side of the card, space is provided so that the teacher may make any general comment about the child's social, emotional, or home problems, which may have

a direct bearing on the child's class placement. Only information which is important with respect to the child's placement should be indi-

cated since the card is not intended to replace the cumulative folders.

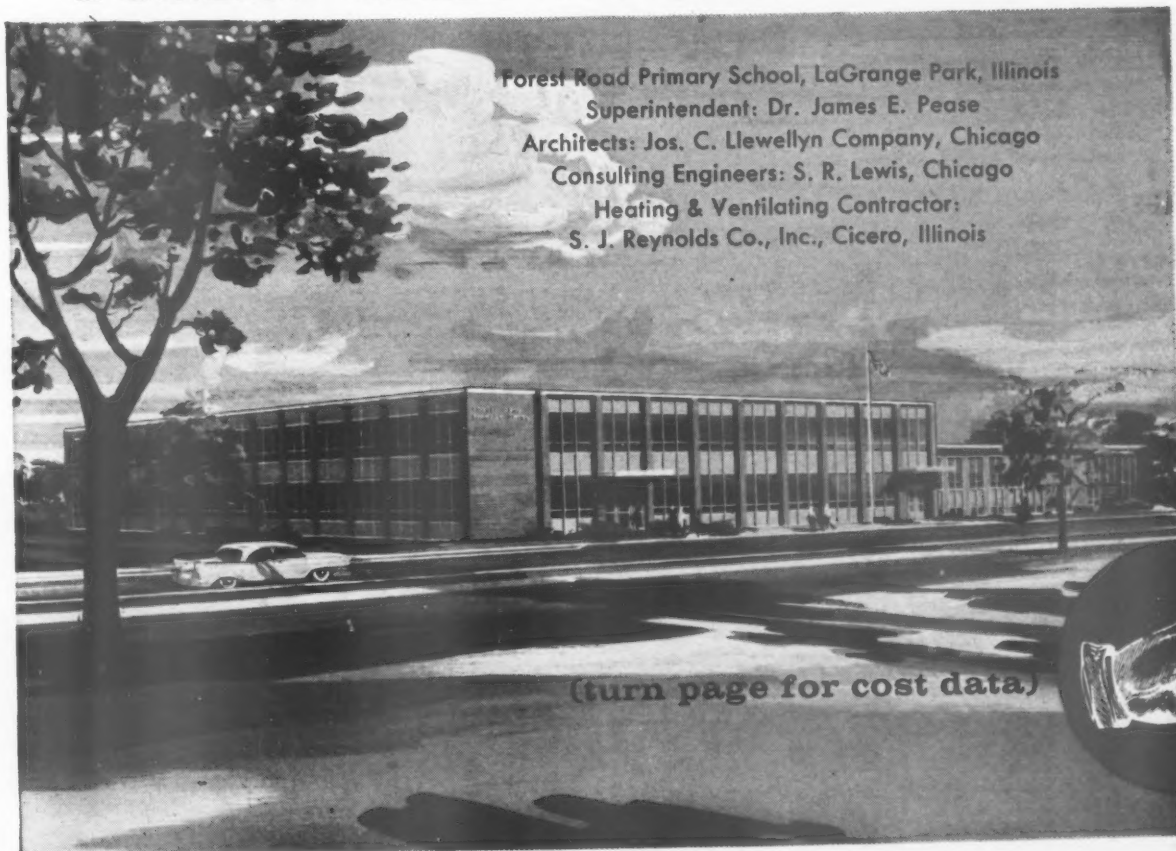
When teachers wish to indicate
continued on page 60

CALKINS		JANE		F		12 20 51											
Last Name		First Name		Sex		Birthdate											
33 SPRUCE LANE		VO 2-5022		LAUREN, JOSEPH													
Address		Phone		Siblings													
PLAINEDGE PUBLIC SCHOOLS																	
Latest Reading Level																	
Grade	Mo.	Da.	Yr.	Teacher	Prim.	1	2	3	4	5	6	7	Low	Average	High	School	
1	5	58		JAMES	12											✓	South
2	5	59		BIRD	Good	Reader	3						Difficulties in Arith.	✓			South
3	5	60		LARSON				4					Stolom with trouble	✓			North
P. D. F. No. 32																	
Comments on social, emotional development, home environment, etc.																	
Niece eager child. Mother Very Cooperative Somewhat over-protective.				1 Jane upsets easily. Is a very close friend of Nancy Moore. Mother now exerts less pressure on her.				2 Jane is pleasant though withdrawn. She seems to be fearful of her father and mother in general. Do not put in same class with Lester Slope.				3 Jane was sent to the psychologist—see Cumulative folder. Should be with male teacher next term.					
S. Berken				F. James				Anne Bird				J. Larson					
				5				6				Other Psychological refer - 12/60 J. Larson					

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FOREST ROAD PRIMARY SCHOOL



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OPTIONAL COLOR! Six new accent colors: Flame Red, Kentucky Green, Topaz Blue, Brushed Orange, Sunset Yellow and Neutral Gray.

OPTIONAL FUNCTION! Your unit ventilator companion equipment can include (1) sink and bubbler unit, (2) sliding door cabinets, (3) open shelf

cabinets, (4) magazine racks, (5) cubicle cabinets and (6) 10- or 20-tray tote tray cabinets. All units, except sink and bubbler and magazine racks, are available in either stationary or mobile models.

And Herman Nelson options (*optional component equipment, optional air conditioning*) make it easy to tailor your system to fit your school budget.

This new-color, new-function architectural styling is available with *all* Nelson unit ventilators—whether they provide for air conditioning or for heating, ventilating and natural cooling only.



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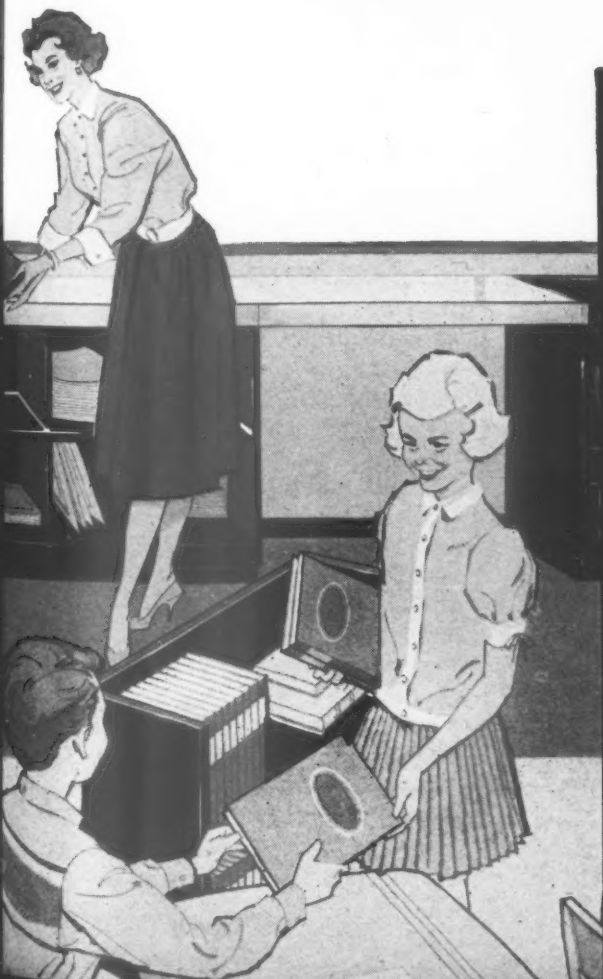
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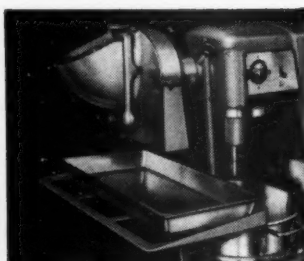
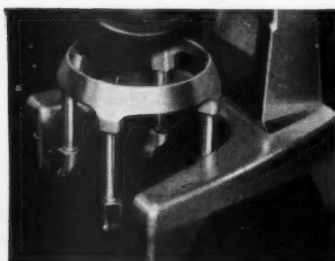
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that a certain child should not be in the same class with another or that a certain child should be with a male teacher, for example, that information is listed. An extra space is provided so that enough boxes will be available in case of retention or in case additional comments are advisable such as statements about physical deformities, death in the family, etc.

When the teachers meet to organize new classes, the cards are usually first separated with respect to sex. Next, the cards of children who should not be together are separated. If reading level, general achievement, or home address are to be used as criteria for regrouping, the cards are separated accordingly. As the new classes are completed, a rubber band is placed around the cards of the children placed together. An identification card indicating the name of the new teacher, number of children of each sex, total class size, etc., is included at the top of each bundle.

Tentative class lists are not prepared since they are replaced by the bundle of cards. The school secretary types cards for any summer entrants and these are added to classes one week before school begins. Children may be shifted from class to class accurately and conveniently. The teacher's paper work is reduced to a minimum. Moreover, the new teacher has an immediate opportunity to spot the strong and weak points of her students.

The grouping cards can be used in many ways. Classroom teachers can use the cards when they prepare their registers, class lists, or when they do preliminary grouping. The cards can also be used when preparing lists of children according to home address (for the transportation office), age, sex, general achievement, reading achievement, number of siblings, and social or emotional adjustment.

Any school system can design its own card according to its specific needs. Like any tool, it can be misused. This is particularly true if the card becomes a means for permanently "pigeon-holing" children in a rigid category. But used properly the cards can provide any school system with an easy, economical and fast method of grouping children and keeping up with their major strengths and weaknesses. **End**

THE FIFTH INSTALLMENT OF
SCHOOL MANAGEMENT'S COST OF EDUCATION INDEX

How much can a district pay for "auxiliary" services?

In this fifth report on SCHOOL MANAGEMENT'S Cost of Education Index, we examine the "auxiliary" services provided to students and staff by the schools. Included are transportation, pensions, insurance, feeding, health services and student body activities.

■ ■ ■ Almost 90% of the average school district's current expenditures go into teaching the children, administering the program and keeping the buildings comfortable and clean. What about the other 10%? How is that extra dime out of every tax dollar that is earmarked for current expenditures being used?

This money falls into what might be loosely regarded as the "auxiliary" services the school provides—both to its students and to its staff. The largest single item is transportation—getting the children to the school. That accounts for 4.2 pennies out of every dollar. Feeding the students once they are in school and providing them with funds for student activities takes another 2.2 cents.

Fixed charges—expenditures for insurance, pension funds, social security, rental of facilities, and fidelity bonds—take up another 3.2 cents, while health and attendance services together account for just seven-tenths of a penny from every current dollar expended.

While the major portion of the school dollar goes for instruction, maintenance and plant operation and, of course, capital outlay and debt service, these "auxiliary" services are taking a fairly substantial—and growing—part of the taxpayer's dollar.

Forty years ago, almost the total school dollar went into housing and teaching children. Major expenditures for transportation, pension plans, social security and health services were practically unknown in the schools. So that while all school expenses have risen, there has

been a special pressure from these sources to obtain some part of the school dollar. As a result, their influence in raising school expenditures is actually greater than might appear from the amount involved.

Interestingly, despite the fact that these auxiliary services are comparatively new to the schools, these areas are usually not affected when there are pressures to cut school costs. This is because transportation has become a vital part of our widespread school systems, while fixed charges are, in reality, fixed. They cannot be cut. What is left amounts to such a small part of school expenditures in the average district (less than 3%) that very little drastic cutting can be done. It is only when schools try to expand and improve these services that opposition emerges. Few taxpayers resent the presence of a nurse at a school. Many would probably object if a psychiatrist or psychologist were added to the health staff.

HOW MUCH ARE WE SPENDING FOR TRANSPORTATION?

More than one-third of the 35,986,000 children attending public elementary and secondary schools were transported by their school districts last year. Most of these students ride in school buses.

In comparing expenditure levels of districts earlier in this study (*see SM, April '60, page 109*), we did not include expenditures for transportation. Why? The reasons are fairly simple.

First, transportation costs can distort the pat-

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tern of expenditures for a district. For example, New York City, with the largest school budget in the nation, spends comparatively little on transportation, since most students who must travel use municipal transportation systems. Some districts in the west, with far smaller total budgets, actually outspend New York City for transportation costs.

Second, comparisons of transportation expenditures depend on many factors that do not enter into other areas. For example, districts that contract for bus service have different expenses from those which run their own fleet. The terrain of the district, number of stops buses must make and type of drivers used, all can bring great cost differences and must be considered in making comparisons.

Despite all of these problems, transportation costs obviously must be considered in accounting for the money a district spends per pupil on current expenditures. This is particularly true in districts where these non-educational costs, (transportation merely gets students to and from school—it does not add to the quality of education) have become so excessive that they are draining needed funds away from the instructional program.

As the Cost of Education Index arrow shows

(see page 63), the Average school in the United States spent \$12.81 per pupil for transportation during the 1959-60 school year. This includes *all* pupils, not just those transported. (See below to learn how to compute number of pupils.) This was a rise of about 70 cents per pupil over the previous year.

One-quarter of our schools (the Quality Quarter) spends almost twice as much as the Average schools—\$24.18 per pupil. The Top Tenth schools allocated \$37.18 per pupil for this item. Not surprisingly, in each case this represented a fairly substantial rise over the year before.

On a regional basis (see tabulations, page 63), we see that the Average schools in Regions 1, 2 and 4 were the heaviest spenders. Region 6 schools spend only one-third of the amount spent by Average schools in Region 2. This is probably largely accounted for by lower wages (many schools in Region 6 use student drivers) and poor enforcement of state safety restrictions, resulting in overcrowding and the use of older buses.

The trend continues much the same among the Quality Quarter and Top Tenth schools, except that here we see in Region 6 a large number of districts that are apparently attempt-

HOW TO COMPUTE PER PUPIL EXPENDITURES FOR YOUR DISTRICT

It takes more money to educate a high school pupil than it does to educate a student in elementary school, according to Dr. Orlando F. Furno, of the U. S. Office of Education. And, because of the effects of sparsity, small schools have to spend more for the same educational services than large schools. Therefore, CEI's per pupil cost figures are based on "expenditure pupil units," rather than actual numbers of students.

Here's how expenditure pupil units were computed by Dr. Furno: Schools with an average daily attendance of less than 317 on the elementary level or 695 on the secondary level received a sparsity correction (see below). Next, because for every dollar spent on an elementary pupil, \$1.30 must be spent to educate a secondary student, secondary ADA was multiplied by 1.3 and then added to the elementary ADA. The resulting figure is called "expenditure pupil units."

To find out your district's per pupil costs, in terms of the figures given in the CEI, multiply all your elementary school pupils by one, all your high school pupils by 1.3. The total obtained is your number of expenditure pupil units.

Here's an example: District A has 2,000 elementary school pupils, no students in high school.

District B has 2,000 high school students, none in elementary schools. District C has 1,000 elementary pupils and 1,000 high school students. If each district's net current expenditures total \$500,000, District A's per pupil expenditures would be \$250, (\$500,000 divided by 2,000 students multiplied by one). District B's per pupil expenditures would be slightly more than \$192, (\$500,000 divided by the result of 2,000 multiplied by 1.3). District C's per pupil expenditures would be about \$217, (\$500,000 divided by the result of the total of 1,000 and 1,000 multiplied by 1.3).

In this case District A is spending more money per pupil than Districts B or C, despite the fact that all are the same size and are spending the same total amount.

With these weighted per pupil costs, it is possible for a district to compare itself with any other district in the nation, no matter what its pupil make-up.

If your district has less than 317 pupils in ADA in elementary schools or less than 695 pupils in ADA in secondary schools, a sparsity correction must be made to get your district's expenditure pupil units. If you will send a postcard to School Management, giving your school's elementary ADA and secondary ADA (separately), SM will calculate your expenditure pupil units for you.

IN WHAT REGION IS YOUR DISTRICT LOCATED?



REGION 1: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

REGION 2: New York, New Jersey, Pennsylvania.

REGION 3: Ohio, Indiana, Illinois, Michigan, Wisconsin.

REGION 4: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

REGION 5: Delaware, Mary-

land, Dist. of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

REGION 6: Kentucky, Tennessee, Alabama, Mississippi.

REGION 7: Arkansas, Louisiana, Oklahoma, Texas.

REGION 8: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

REGION 9: Washington, Oregon, California, Alaska.

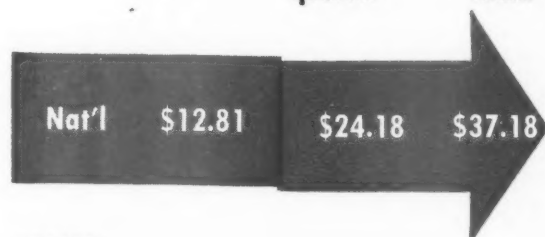
HOW MUCH ARE WE SPENDING PER PUPIL FOR TRANSPORTATION?

1959-1960

Average

Quality
quarter

Top
tenth



REGION

1	\$16.24	\$23.70	\$28.63
2	18.00	32.66	41.03
3	12.10	25.95	39.88
4	15.51	27.82	38.64
5	10.40	17.07	28.23
6	5.89	15.55	31.41
7	13.22	22.85	26.84
8	10.27	19.52	27.53
9	9.47	15.70	32.24

DISTRICT SIZE

1	\$ 3.74	\$ 7.59	\$11.40
2	6.07	9.64	14.96
3	6.80	14.60	19.54
4	8.64	15.05	23.75
5	16.14	23.89	33.01
6	24.65	27.10	35.36
7	24.71	35.34	46.80

ing to rise above the others to provide safer transportation for their pupils. Thus, among the Top Tenth districts Region 6 ranks above four regions and almost on a par with a fifth.

Before moving on to the effects of size, let's examine what percentage of the budget is being spent for transportation in schools around the nation. The Average school (*see arrow, page 64*) is earmarking 4.2% of its current budget for transportation. This seems like a fairly reasonable figure. But one-quarter of the schools are spending 8.2% of their budgets on this item and for one of every 10 districts, transportation represents almost 12% of the current budget. These figures show little change from the year before.

If we consider that, in the average district, almost 73% of the budget goes for instruction while another 21% goes for operation, maintenance, administration and fixed charges, it is rather obvious that in one of four districts transportation costs are weighing very heavily on the current budget. Unless the budget is extraordinarily large, these districts are probably being forced to cut back in other vital areas.

On a regional basis (*see tabulations, page 64*), no significant trend appears among the Average schools (although Region 9 schools spend somewhat less of their budgets for transportation). But among the Quality Quarter and Top Tenth schools large variations do appear.

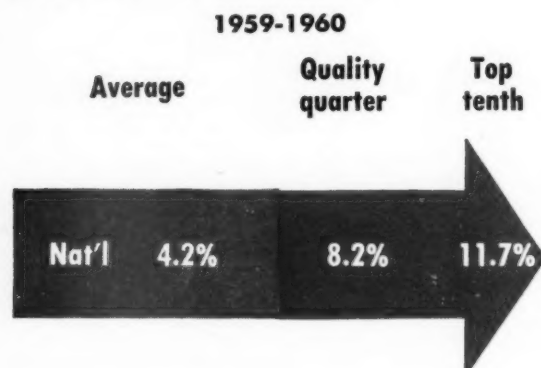
The effect of size

Clearly, both on the basis of amount spent per pupil and percentage of expenditures, small districts spend more on transportation than do large ones. The largest districts, on the average, spend just \$3.74 per pupil for transportation (*see tabulations, at left*) while the smallest districts spend more than six times as much, (\$24.71 per student). The difference is almost as great in the Quality Quarter and Top Tenth.

It must be remembered, of course, that al-

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WHAT PART OF OUR CURRENT BUDGET GOES FOR TRANSPORTATION?



REGION

1	5.2%	7.7%	11.0%
2	4.5	7.6	11.7
3	4.5	8.5	12.3
4	5.8	9.5	12.3
5	4.6	7.9	13.3
6	3.5	8.6	14.3
7	5.5	9.5	12.1
8	3.5	6.0	11.0
9	2.8	4.4	8.9

DISTRICT SIZE

1	1.0%	3.1%	3.8%
2	2.0	3.5	5.8
3	2.0	4.2	8.5
4	2.7	5.0	7.3
5	4.9	8.5	11.1
6	8.4	9.6	10.7
7	8.1	11.2	14.8

though Sizes 6 and 7 show up here as small schools, many of these districts are already the result of consolidations of even smaller districts. Children attending these schools often have to be transported over long distances because of the consolidations.

Unfortunately, we find that on a percentage basis, the *burden* of transportation is also heaviest on the small schools—the ones least able to afford it (*see tabulations above*). Whereas the Average large schools spend little more than 1% of their budgets on transportation, more than half of the smaller districts must spend 8% and a large number must spend close to \$15 out of every \$100 available for all current expenditures.

This is in no way a reflection on the methods

used to transport students in the smaller districts. It is simply an unhappy fact of life that the larger districts have available much better public transportation systems, and the sparsity of pupils in the smaller districts, along with the condition of terrain and roads, make the transportation burden immense.

It does appear that if the costs of transporting students to consolidated schools continue to grow, much of the advantage of consolidation will be dissipated through an inability to pay for an improved program. Adequate state aid for transportation is a must in these small, rural, sparsely settled districts, if school quality is not to deteriorate because of the necessary transportation burden.

HOW MUCH ARE WE SPENDING ON FIXED CHARGES?

The second largest item among the auxiliary services is fixed charges. The growth of these expenditures (made up largely of employee benefits—such as pensions and Social Security—and insurance) has been phenomenal over the past 40 years. In the 1917-1918 school year, for example, the national total for fixed charges was less than \$6 million. This year an estimated \$710 million will be allocated for these expenditures. Forty years ago, almost the entire expenditure was for insurance. Today this is far outweighed by pensions and Social Security payments.

The Average school in the nation (*see arrow, page 65*) spends \$9.76 per pupil for fixed charges. This is a rise of 83 cents per pupil over the previous year. Quality Quarter schools spend a minimum of \$16.99 and the Top Tenth have an outlay of \$26.40 for these items. Each figure represents a substantial increase over the previous year.

On a regional basis (*see tabulations, page 65*), we find that fixed charges are considerably higher in Region 2 than anywhere else. Regions 8, 9 and 4 form a second group well behind the leader and then there is a huge drop-off to the other five regions.

This picture remains much the same in the Quality Quarter and Top Tenth districts except that Region 4 falls somewhat behind and Region 3 (in the Top Tenth) moves up. As a matter of fact, among the Top Tenth districts Region 2 is spending more than 10 times as much as the Top Tenth districts in Region 7 and Average schools in Region 2 outspend the Top Tenth districts in five other regions. Less than 10% of the districts in Region 2 spend as little per pupil on fixed charges as the Top Tenth districts in Region 7.

This huge difference in expenditures is probably explained by three factors. First, the

HOW MUCH ARE WE SPENDING PER PUPIL ON FIXED CHARGES?

1959-1960

Average

Quality
quarter

Top
tenth



REGION

1	\$ 5.71	\$ 8.32	\$17.36
2	23.22	52.14	72.77
3	4.35	9.03	25.62
4	12.86	16.31	18.34
5	4.03	6.30	11.08
6	4.94	6.86	9.29
7	2.82	4.07	6.86
8	15.85	21.85	26.37
9	15.22	18.09	23.40

states comprising Region 2 have excellent state administered retirement plans (*see table below*). Second, these districts in general have more professional staff members per pupil and, third, they generally pay higher salaries. Each of these is an important factor in raising the amount that must be put aside for fixed charges.

The effect of size

Interestingly, the size of a district has little or no effect on its fixed charges. There is almost no variation among the Average, Quality Quarter and Top Tenth districts in the amount per pupil allotted to fixed charges. This is so, of course, because no matter how small or large a district in any given state is, it is covered by the same state laws concerning retirement and pension plans. Since these account for better than three-fourths of fixed charges, variations according to district size—caused by such expenditures as insurance—would be very small.

How about the burden fixed charges represent? As the arrow shows (*see page 66*), the Average district in the United States allocates 3.2% of its current budget for fixed charges. The Quality Quarter schools raise the ante to 5.4% while those in the Top Tenth allocate 7.4%.

Turning to the regional breakdown (*see*

STATE ADMINISTERED RETIREMENT SYSTEMS FOR TEACHERS (PUBLIC SCHOOLS)

SOCIAL SECURITY

Separate retirement plan for teachers		Plan covers all school employees	General system ¹	No state system	Total coverage ²	Partial coverage	No coverage
Alabama	Massachusetts	Florida	Arizona	Delaware	Alabama	Alaska	Florida
Alaska	Minnesota	Kansas	Colorado	South Carolina	Arizona	California	Arkansas
Arkansas	Missouri	Michigan	Hawaii	South Dakota	Delaware	Georgia	Colorado
California	Montana	Nebraska	Iowa		Idaho	Hawaii	Connecticut
Connecticut	New Hampshire	New Jersey	Maine		Indiana	Minnesota	Illinois
Washington, D.C.	New York	Oklahoma	Mississippi		Iowa	Montana	Kentucky
	North Dakota	Pennsylvania	Nevada		Kansas	New York	Louisiana
Georgia	Ohio	Texas	New Mexico		Maryland	North Dakota	Maine
Idaho	Tennessee	Utah	North Carolina		Michigan	Oklahoma	Massachusetts
Illinois	Vermont	Washington	Oregon		Mississippi	Pennsylvania	Missouri *
Indiana	West Virginia		Rhode Island		Nebraska	Tennessee	Nevada
Kentucky	Wisconsin		Virginia		New Hampshire	Texas	Ohio
Louisiana			Wyoming		New Jersey	Wisconsin	Rhode Island
Maryland					North Carolina	New Mexico	Vermont
					Oregon		
					South Carolina		
					South Dakota		
					Utah		
					Virginia		
					Washington		
					West Virginia		
					Wyoming		

Compiled by Dr. Orlando F. Furno

¹ Retirement system covers not only teachers but other city employees such as policemen, firemen, etc.

² Social Security covers most, if not all, public school teachers.

* Except in Kansas City and St. Louis.

tabulations below), we find that in Region 2 the *Average* school earmarks 6.4% of its budget for fixed charges. Only Region 8 districts (5.4%) come anywhere near this figure, while *Average* districts in Regions 3, 5 and 7 spend less than 2% of their current budgets on this item.

In most of the *Quality Quarter* and *Top Tenth* districts in Region 2, fixed charges take more than 12 cents out of every current dollar. It is proper to ask at this point whether or not these payments detract from the educational program.

No one really knows. Many factors must be taken into account, not the least being how much is left over for other current needs. Look at Region 2. Schools there spend more dollars per pupil for fixed charges than those in any other region. Thus, if a district in Region 6 spends \$238 per pupil (as do the *Top Tenth* schools there), an expenditure of 12% for fixed charges would reduce the amount available for all other areas to just a little over \$200.

But, if a district in the *Top Tenth* of Region 2 allocates 12% of its current expenditures (about \$550 per pupil) to fixed charges, it still leaves almost \$500 per student for other expenditures.

Perhaps more important is the fact that fixed charge payments are indicative of a well-

paid staff and are an added attraction in recruiting and keeping superior teachers. As in any white collar trade, a good pension plan is an important inducement in considering a job.

So, although fixed charges do not actually of themselves *add* to the quality of a school's instructional program, as do teaching materials, they are a good reflection of quality and, indirectly, do affect the program a school can offer.

HOW MUCH ARE WE PAYING FOR HEALTH SERVICES?

The State of Pennsylvania has recommended that there be at least one registered nurse for every 1,500 elementary or secondary students. And a great majority of the state's school superintendents feel that this load is too heavy. For purposes of salary, the school nurse in Pennsylvania is placed in the same category as a professional teacher, with the same pay scale.

If every school district in the United States lived up to these minimum standards, the number of public school nurses would more than double—and their average salaries would increase by about 50%. As a result, health service costs per student in the *Average* district would rise to about \$4.25 per student, rather than \$1.83, as they are now (*see arrow below*).

WHAT PART OF OUR CURRENT BUDGET IS SPENT ON FIXED CHARGES?

1959-1960

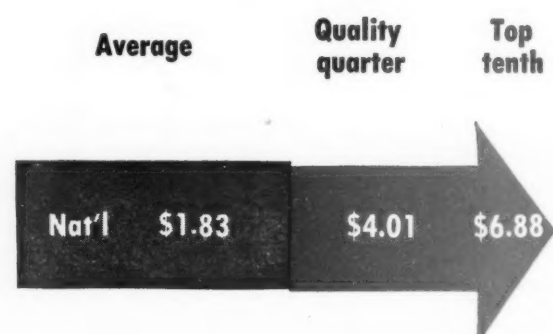


REGION

1	2.0%	3.4%	6.3%
2	6.4	11.7	12.9
3	1.4	2.7	7.7
4	4.6	5.2	5.8
5	1.7	3.0	5.2
6	2.7	3.2	5.1
7	1.2	2.0	2.8
8	5.4	6.6	7.5
9	4.5	5.0	5.7

HOW MUCH ARE WE SPENDING PER PUPIL ON HEALTH SERVICES?

1959-1960



REGION

1	\$3.36	\$4.34	\$ 5.24
2	6.50	9.08	11.65
3	.79	2.13	3.70
4	1.23	2.50	3.35
5	.57	1.10	3.84
6	.11	.56	1.09
7	.50	1.61	2.71
8	2.13	3.88	6.03
9	3.60	6.65	7.94

It would seem apparent, then, that most school districts are holding a pretty tight lid on their health services program. The Quality Quarter districts nationally are spending \$4.01 per pupil for health services—less than the *minimum* if we project the Pennsylvania recommendations. The Top Tenth schools spend \$6.88 per pupil. It would appear that only at this level are districts beginning to provide such “optional” services as psychiatric and dental help.

On a regional basis (*see tabulations, page 66*), the variations are huge. In Region 2, the Average schools spend as much as those in the national Top Tenth. Contrast these districts with those in the Top Tenth of Region 6 which spend less than the national average! Only in Regions 1, 2 and 9 do the Average schools approximate Pennsylvania’s recommendations.

District size variations are comparatively slight, indicating that the effort to provide adequate health services does not depend on the size of the school district. As a matter of fact, among the Top Tenth districts, the smallest schools spend more per pupil on health services than do any of their larger neighbors. This is probably due to the fact that rural schools must provide their own health services or children do without. In the larger districts, children can often benefit from municipal health services.

In terms of the percentage of the total current budget that is spent on health services, it is interesting to note that even though this is a small item in the budget some regions either feel it is unimportant as a school service or that this is an area in which they can lower costs. In any case, while the Average schools nationally spend 0.6% of their budgets on health services, in Region 6 the Average school spends less than 0.1% of its budget on these services and even the Top Tenth schools spend less than 0.5%. (Of course, in some districts schools are serviced by public health nurses who are not on school district payrolls.) In Region 2, the average district allocates 1.7% of its budget to this item and the region’s Top Tenth schools lead the nation with a 2.8% figure.

How many nurses?

The Pennsylvania law cited earlier, recommends that there be one registered nurse for every 1,500 public school students. This, professionals in the field believe, is far too heavy a load. The national average for *all* professional health workers (including doctors, psychiatrists, dentists *and* registered nurses) doesn’t even begin to approach Pennsylvania’s minimum. It is just .34 professionals for every 1,000 students (*see arrow, this page*). The Quality Quarter schools catch up with Pennsylvania, employing

.78 professionals for every 1,000 students, while the Top Tenth districts hire 1.22 professionals for every 1,000 students.

On a regional basis (*see tabulations below*), we see again that only Region 2 is doing an outstanding staffing job, with almost 50% of its districts falling in the national Top Tenth. In Region 6, almost 90% of the schools report fewer than one professional health staff member for every 100,000 students!

On a district size basis, there is no set pattern. Only Sizes 6 and 7, the two smallest groupings, fall behind the Average schools in the larger districts. In the main, though, it appears that there is little difference in health staffing according to size.

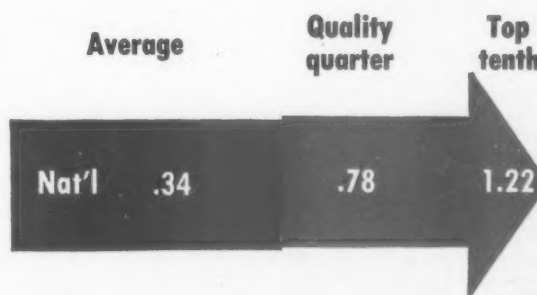
What salaries are we paying?

The Average school in the nation is paying its professional health employees an annual average salary of \$3,500 (*see arrow, page 68*). The Quality Quarter schools pay \$5,203 per year and the Top Tenth raise salaries to \$6,739. Again, only schools that fall into the national Quality Quarter meet the Pennsylvania requirement that nurses’ salaries should be equal to those for teachers.

On a regional basis, it is not surprising (*see tabulations, page 68*) to find that average

HOW MANY PROFESSIONALS DO WE HAVE FOR HEALTH SERVICES?

1959-1960



Number of health service workers per 1,000 students

REGION

1	.89	1.02	1.42
2	1.20	1.77	2.14
3	—	.46	.72
4	.21	.52	.72
5	.10	.28	.98
6	—	—	.16
7	—	.40	.69
8	.46	.78	1.12
9	.52	.81	1.01

districts in Region 2 exceed the national Quality Quarter. But it is surprising to find that Region 9 districts pay more than do those in Region 2. Districts in Region 6 that paid salaries at the national average would be considered outstanding, while those in Regions 1, 2, 8 and 9 that offered salaries at the national average would probably have a difficult time finding takers. It stands to reason, from these and the foregoing figures, that in some regions of the nation a large majority of the students go without health services. There simply aren't enough health personnel to take care of the children's health needs. Whether this is a budgetary problem, or a disagreement about the role of the schools in providing health services, is hard to determine from these figures alone. It is apparent that many districts question whether schools should provide health services. They are asking whether these services are the responsibility of the schools.

HOW MUCH ARE WE SPENDING FOR FOOD SERVICES?

The object of a good school lunch program is to provide the students with a nutritious meal. Sometimes, depending upon the income of the area and the availability of inexpensive or subsidized foodstuffs, it is possible to run the cafeteria in the black, or even to show a little profit.

This, however, is neither the goal nor the measure of a good lunch program. The likelihood is that the district that is willing to subsidize its lunch program to a limited extent is better able to provide good meals than one that will allow no deficit in its operation. The better program will *try* to stay solvent, but this will not be its prime area of concern.

In the Cost of Education Index discussion of food service expenses, we are speaking only of the out-of-pocket costs to the district—the subsidy the district itself gives to the lunch program.

The burden of food service expenditures on the average district in the United States is very slight, well under 1% of the total current budget. One of four districts allocates as much as 2% of the budget to this service and 10% of the district's spend somewhat more.

In terms of expenditures per pupil, the Average district in the United States spends 76 cents per pupil on food services (*see arrow, below*). The Quality Quarter districts, nationally, spend \$6.12 per student, while in the Top Tenth schools expenditures jump way up to \$25.40. This large per pupil expenditure probably doesn't indicate inefficiently operated lunch programs. It more likely reflects the policy of the districts to support willingly most of the school lunch program with public funds, rather than have the burden—in the form of high

HOW MUCH ARE WE PAYING HEALTH SERVICE EMPLOYEES ANNUALLY?

1959-1960



REGION

1	\$4,167	\$4,900	\$5,800
2	5,240	6,200	7,270
3	—	4,450	6,444
4	1,550	4,400	5,933
5	2,325	3,770	5,407
6	—	—	3,150
7	—	3,879	4,881
8	3,868	4,883	6,055
9	5,638	7,110	7,575

HOW MUCH ARE WE SPENDING PER PUPIL FOR FOOD SERVICES?

1959-1960



REGION

1	\$.39	\$.88	\$ 2.15
2	1.20	3.35	9.87
3	1.05	10.80	25.76
4	.85	25.55	31.41
5	.76	4.23	11.63
6	—	.28	1.22
7	—	.64	22.77
8	.57	7.55	28.85
9	2.23	10.56	24.38

prices—fall on the parents of children who take part in it.

Looking at food service expenditures on a regional basis (*see tabulations, page 68*), we find that in the average schools there is comparatively little difference from region to region. In the Quality Quarter, however, Region 4, along with Regions 3 and 9, jump unreasonably. Regions 3, 4, 7, 8 and 9 all seem abnormally high in the Top Tenth schools.

A breakdown by size reveals almost no variation from the largest to the smallest, except that in the Quality Quarter and Top Tenth groupings the smaller schools do outspend their larger neighbors.

It would seem from this combination of facts that two elements, other than district willingness to support the lunch program, may account for the abnormally high per pupil expenditures in the Top Tenth of five regions. One would be bookkeeping variations—districts which count as out-of-pocket expenses any monies paid out of general funds, even when those funds are later reimbursed by food service receipts.

And then there are still a small number of districts that have refused to take part in the federal milk and surplus foods programs. These districts obviously must charge their students

much more and must also make up some of the missing government subsidy from their own current funds.

HOW MUCH ARE WE SPENDING FOR STUDENT BODY ACTIVITIES?

Are camera clubs, student newspapers, orchestras, science clubs and planned social activities an important part of the school program? If one is to judge by school expenditures on student body activities, the answer is "no."

The Average school in the United States (*see arrow, at left*) spends less than a penny per student for these activities. The Quality Quarter schools have an expenditure of \$1.26 and the Top Tenth \$4.05.

In most schools, the bulk of student body activities are paid for by dues contributed by the students or through contributions from the PTA or local service clubs.

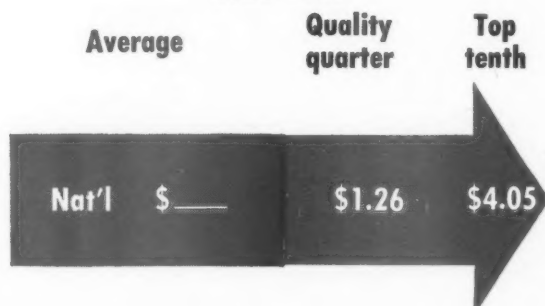
Regional differences have little or no effect on these expenditures except in the Top Tenth schools where the range between the bottom districts (Region 6) and the top ones (Region 4) is close to \$12 per student. Even the Top Tenth schools in Region 6 spend less than \$1 per pupil on student body activities.

District size also makes little or no difference. Big or little, school districts tend to hold their expenditures for student activities to almost nothing.

Since almost all the districts in the nation tend to follow the same pattern in this expenditure area, it seems reasonable to dismiss it as proper practice. But one question does need to be raised. Are these student body activities educationally sound and do they fill a cultural void? If the answer is "yes" are we really following a proper course when we turn over the financing of these activities to the whims and pet projects of outside groups? **End**

HOW MUCH ARE WE SPENDING PER PUPIL FOR STUDENT BODY ACTIVITIES?

1959-1960



HOW THE COST OF EDUCATION INDEX WAS COMPILED

Hundreds of school districts participated in building SM's Cost of Education Index. Each filled out a detailed four-page questionnaire which itemized expenditures for dozens of budget items, for a two-year period (1958-59 and 1959-60).

This questionnaire was devised by Dr. Orlando F. Furno, who is presently with the U.S. Office of Education. It was at his sug-

gestion, and with his guidance, that this project was developed.

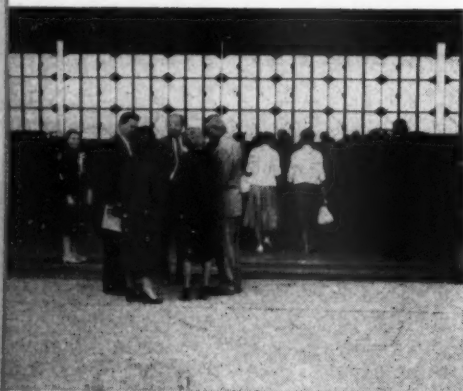
The final total of school districts used in the carefully weighted sample was 583. Each was selected because it represented, by virtue of geographical location, size, and cost per pupil, a randomly selected unit of measurement. The accumulated data has been processed in an electronic computer.



Teachers take to the air

School-age youngsters can fly rings around teachers when it comes to knowledge of flight and air travel. Here's an easy way to make your teachers air-minded while giving them a real bird's eye view of your district.

Salinas teachers spent a day at municipal airport learning of air age.



■ ■ ■ School districts more than 2,000 miles apart conducted independent "airlifts" in recent months to acquaint their teachers at first hand with the facts about the air age.

■ In Jackson County, Mich., 175 teachers spent an hour and a-half getting briefed on airport operations, air traffic control and air travel in general. Then they boarded planes for an airborne circuit of the county and a closeup view—at 1,000 feet—of the county's schools as well as the areas surrounding them.

■ In Salinas, Calif., some 250 teachers in the Salinas high school and elementary districts spent a day at the municipal airport and also took short flights over the city and its schools. In addition, they inspected helicopters and military aircraft, witnessed "sky-diving" exhibitions

by parachutists, viewed films and waded through flight literature, photos, charts, maps and models donated by 50 business firms.

Teachers in both areas came away from the demonstrations with a better understanding of what "air age" means—and more certain of their ability to answer the bewildering number of questions about flight and air travel put to them every day in the classroom.

More than a "one-shot" program

The air education workshop was sparked in Salinas by the schools and the civil air patrol. But the all-day session marked only the beginning of a program designed to last throughout the year. Through the cooperation of 30 local organizations, it is designed to offer a variety of activities to both teachers and students.



In addition to taking short flights over the city and its school, the Salinas, Calif., teachers inspected helicopters and military aircraft, viewed films about flight and examined great amounts of flight literature.

Related activities on the agenda:

- **A ground school** and flight school program, offered through the adult education office, which will lead to a private pilot's examination.
- **In-service meetings** to be addressed by prominent people who will discuss the air and space age.
- **Field trips** to permit interested teachers to visit other air facilities in the Salinas area from time to time.

According to Robert W. Deal, administrative assistant in the Salinas schools, the air education workshop is something that administrators in other districts could easily copy. Here is how it was done in Salinas.

Air workshop blueprint

The entire operation and organization of the workshop consisted of four basic steps: 1.) committee work,

2.) chairman's work, 3.) project operation and 4.) followup.

■ **Committee work.** A group of staff members interested in air education worked together to develop a feasible program for the workshop. Since the program was a joint venture between districts, the committee assumed responsibility for getting the agreement and cooperation of all the administrators involved before taking a single step.

It also conducted a public relations program designed to inform the public about the workshop and invite local organizations to provide equipment and personnel for the workshop session.

■ **Chairman's work.** The chairman functioned as a one-man communications center. Through him was channeled all contacts with outside

Interested teachers enjoyed close-up inspection of different aircraft.



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Donald P. Shock, superintendent, Salinas Union High School District, took a demonstration ride in a dusting helicopter with pilot Al Houbein at the controls.

organizations, coordination of offers of assistance, and release of information to neighboring administrators and the general public.

In addition, he set up the final timetable of events for the municipal airport session and arranged a luncheon for participants.

■ **Project operation.** A central receiving point was set up at the airport for participants. Here they received equipment and instructions, and then were guided to other locations to engage in the day's varied activities. Since large groups were involved and rotation of personnel was necessary, signal code was used to keep things moving. Each time the airport siren blew, a group moved on to its next station.

Throughout this phase of the program, the chairman circulated from point to point to check on how smoothly things were going and to provide additional assistance and equipment where required.

■ **Followup.** In order to give the project as much general notice as possible, an attempt was made to invite the public to participate in some way near the end of the session. In Salinas, the late afternoon parachute jumps provided an ideal event to which the public could be admitted.

Followup activities included a careful acknowledgment of the contributions made to the workshop by individuals and organizations. More

important was the immediate development of additional projects growing out of the initial workshop session—the flight school program, visiting lecturers and field trips.

How the knowledge and experience obtained by staff members could best be put to use in the schools was left to the individual districts to determine. But two clear facts emerged from Salinas' air education workshop: In terms of encouraging more air education in the curriculum and of orienting new teachers to their local geography, the workshop was considered a resounding success. **End**



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Electric schools

continued from page 38

pense was absorbed when the new 11-room additions were made last year since the original transformers were capable of serving the added units as well.

Demand rate means simply that the schools buy their power not on the basis of how much they are using alone, but in terms of how much is reserved for their potential use. To keep demand down and draw

power during non-peak hours, another economy—two means of control are used by the district:

1. Zoning. Each school is divided into six zones. Each zone is heated independently of the others. Thus, the northwest zone, being exposed to the coldest compass point, has the greatest need for heat during a 24-hour period. With zoned heating, its needs can be filled exclusively without unnecessarily heating other sections of the building.

2. Staggering. In order to prevent a full-blast morning warm-up, with all zones being heated at once, each is brought up to proper temperature at a different time before school opens. The purpose of staggering the heating periods is to prevent an enormous peak demand from building up. The schools' price structure for electric power is such that they pay the average of their three highest peaks during the month. By staggering heating periods, peak demand is kept to a min-

Comparative costs in Monroeville, Pa.

The gas-fired Evergreen elementary school and the all-electric Northern Pike elementary school (see plan view, right) were compared in Monroeville to determine cost differences. Both schools—with 13 classrooms, multi-purpose room, health room, offices—are generally identical and were planned by the same architect. One difference: six inches of blown insulation was installed in the Northern Pike school.

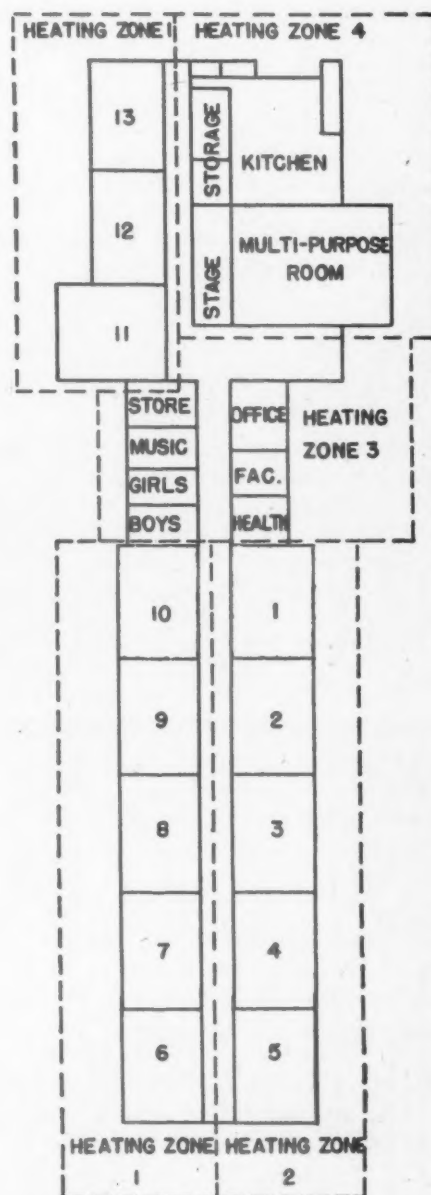
Cost of construction

	Gas-fired Evergreen	All-electric Northern Pike
General contract	\$351,685	\$341,395
Electrical work	39,490	45,424
Heating and ventilating	53,500	46,060
Plumbing (excluding tap-in fees)	44,400	36,876
Total	\$489,075	\$469,755

Note: Evergreen classrooms are 24 feet by 32 feet; Northern Pike classrooms are 24 feet by 36 feet. Total area of Northern Pike (26,000 square feet) is almost 7% larger than total area of Evergreen (24,080 square feet, not including boiler room). Estimated Evergreen costs to compensate for difference in size: \$489,075 by 1.07, or \$523,310. Extra total investment for gas-fired school: \$53,555.

Estimated annual charges

	Gas based on Evergreen experience	Electric
Fuel (original estimate) average year	\$2,120	\$5,210
Repayment of extra \$53,555 investment on the 30-year mortgage	\$1,785	
Average annual interest @ 4½% on declining balance of extra \$53,555 investment	1,215	
Reserve for boiler replacement	300	
Operation of boiler room pumps	300	
Boiler insurance	107	
Building insurance saving	46	
Boiler maintenance & supplies	150	
	\$6,523	\$5,210
Estimated annual saving		\$1,313
Decrease in labor costs		\$ 600
		\$1,913



imum and the amount paid monthly for electricity is consequently lower. The result in terms of heat in Utica's two schools is simply that it takes 35 minutes instead of 10 to heat each to the desired temperature before the students arrive in the morning.

But neither of these controls could be very effective unless each building was thoroughly and completely insulated to prevent heat loss from radiation when the heating system was not in operation. Nor, for that matter, could the schools use the 25% of heating needs afforded by a roomful of students if insulation were not adequate. This usable heat would simply be dissipated without ever being harnessed properly to help keep the buildings warm.

Couldn't these same insulating economies be applied to conventionally heated buildings? They could, of course, but the need to economize on less expensive fuels—gas, oil, coal—is not as imperative. In electric schools, however, insulation can mean the difference between success or failure from a cost point of view.

But there is another factor in the cost picture that must be considered here. Conventionally heated schools are more expensive to build. Consequently, it becomes more difficult to justify additional expenditure for total insulation in terms of long-range fuel savings. But the electric school, even with the additional ex-

pense of dollars spent for necessary all-around insulation, can still be built for less.

Favorable reaction

Most of these same means of keeping electric fuel costs down have been employed in the Northern Pike elementary school, opened in December, 1958, in Monroeville, Pa. The response to this pioneering building in western Pennsylvania has been so favorable that the district has already completed a second all-electric elementary school and is currently considering an all-electric junior high. What are the reasons for the success of electric schools in this fast-growing district just outside Pittsburgh?

"One reason we turned to electricity in the Northern Pike school was the lower initial construction cost," says Dr. Joseph E. Ledger, vice president of the Monroeville school board. Because Pennsylvania's state codes covering the use of electricity differ from those of Michigan, the district was not required to buy its own transformers in order to get a special electric rate for its schools. One immediate result: less money spent on construction than was spent for a comparable, conventional school nearby. (See box, page 75, for comparative costs.)

But in Pennsylvania, as elsewhere in the nation, electricity is more expensive than combustion fuels. So the Northern Pike school also limits its electric consumption

to keep costs down. One way it does so is by thoroughly insulating the building. Where should this insulation be placed?

"Your greatest heat loss," says John Keegan, of Walter E. Schardt & Associates, architects for the Monroeville district, "would be through the roof, so we usually specify at least six inches of insulating material, immediately above the ceiling. Side walls should also be insulated and, of course, with slab construction, you need some kind of insulation around the perimeter."

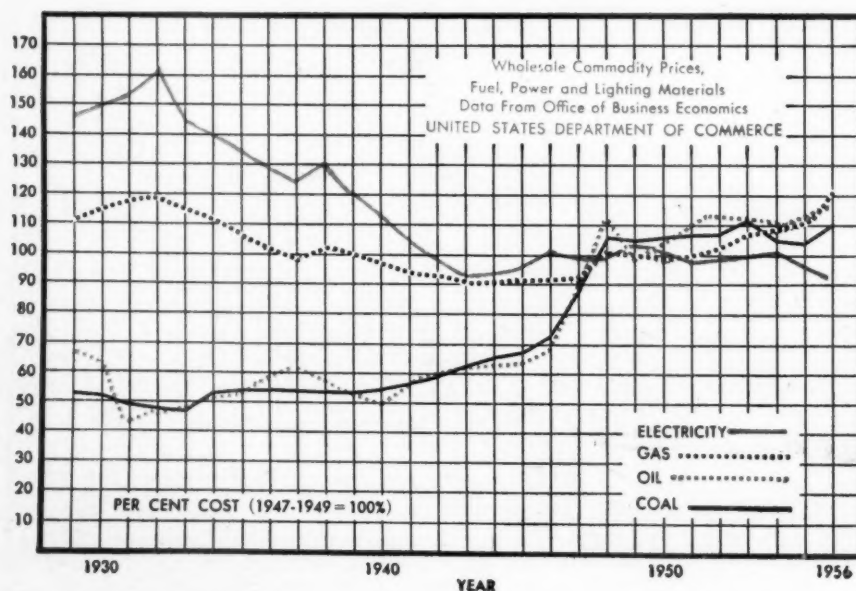
Monroeville also uses zone heating and a staggered heating schedule to keep peak demand low. The cost per kilowatt-hour decreases as consumption mounts, but the trick is to keep the peak demand as low as possible throughout a given month. The demand charge in Monroeville is based upon the maximum 15-minute period each month. With careful controlling and adjustment of automatic clocks, the Northern Pike school has been able to avoid excessive demand charges while keeping its kilowatt consumption to a minimum.

The district could buy its power without demand if it chose to. This would eliminate the need for zoning and staggering, requiring only total building-wide heat being provided when called for—especially during early morning warm-up. Upon investigation, however, the school board found that such large-scale heating demands would dictate the purchase of over-size initial equipment. This initial over-sizing could so increase the cost of electrical equipment needed that electric heating would become uneconomical from an initial cost, as well as an operating point of view.

Operating costs were apparently another factor that originally influenced the board in favor of electric heating, despite the relative expense of electricity. "We're not certain that electric fuel costs will continue to be higher in the years ahead," says Dr. Ledger. "Electricity, in fact, has tended to level off while the cost of other fuels has continued to rise." (See chart, at left, for comparative fuel prices since 1930.)

The third important consideration about the electric school that inclined the Monroeville board to favor it was the ease of maintenance

COMPARISON OF FUEL PRICES



required. The Northern Pike school has a woman custodian, Mrs. Margaret Novak, who handles all daily custodial duties for the 13-room elementary school by herself. Only recently, a man was hired for part-time custodial attendance—from 7 p.m. to 11 p.m. However, this was due to the increased evening activities being held in the school.

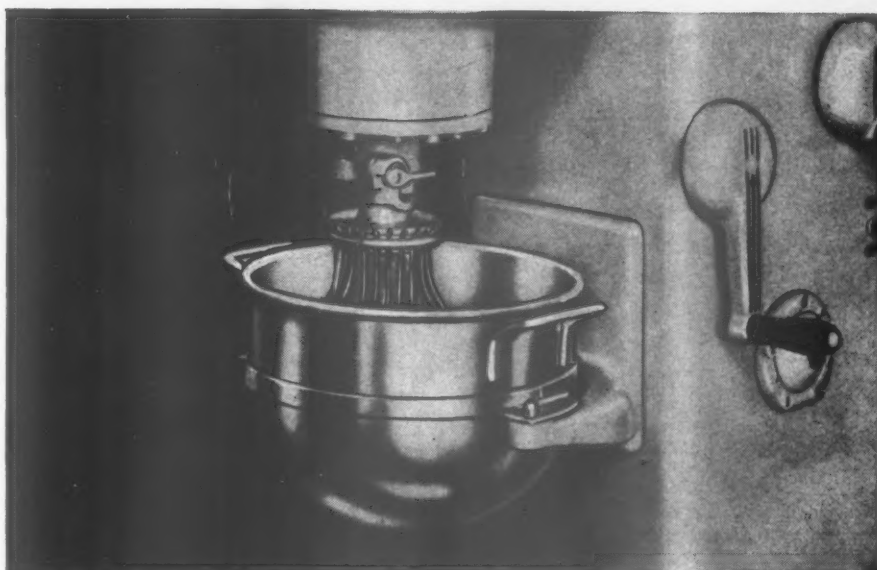
How you can proceed

Monroeville's willingness to build more all-electric schools after its experience with Northern Pike elementary indicates that the idea has been put to use successfully in western Pennsylvania. You may be interested in looking into the subject for proposed schools in your own district. How should you proceed? Here are some pointers:

■ **Timing.** Critical to the success of your proposed school is *when* you decide to "go electric." In the words of Dr. Ledger, "You must do it when your school's still on the drawing board—not after you start building." If you try to convert a plan already designed for a wet-heat system, it will probably prove too expensive as an electric school. It may have too much exterior wall, too little insulation, and excavation requirements that are unneeded for heating by electricity. Another total loss: the boiler room, if simply removed from the original plan, will be lost as a teaching area.

■ **Assistance.** Don't hesitate to discuss your school proposal with your local power company, architect, builder and electric equipment manufacturer long before any decision has been made. The local utility may be able to offer special inducements as well as suggestions for planning the most efficient building possible. Your architect, builder and the manufacturer may have some worthwhile ideas, too.

■ **Economy.** You'll probably find that you'll save on initial construction costs when you build for electricity. But don't try to stretch such savings further by skimping on insulation. If you do, your operating costs are bound to be excessive and your economy will be no economy at all. Summing up on the importance of insulation, one prominent authority has this to say, "If you insulate, you can afford to go to electric heating; if you don't, you can't afford it. It's as simple as that." **End**

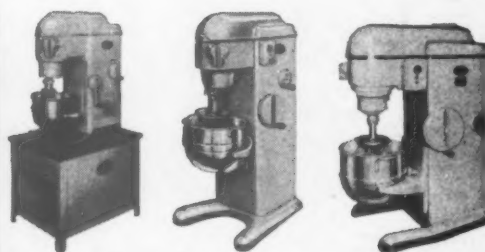


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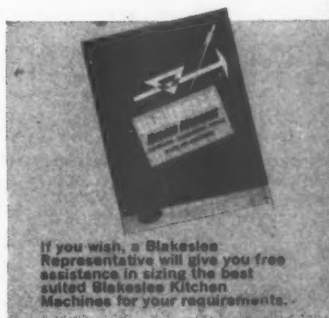
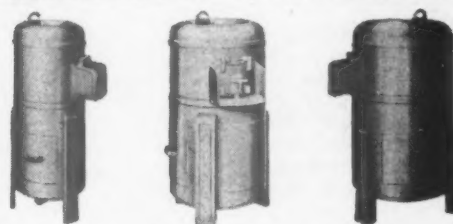
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School law

continued from page 46

Court of Errors) have ruled that state legislatures have the right to pass both enabling legislation for such transportation and even compulsory school bus service laws.

On the other hand, as in this case, it is improper for a locality or school district to contract to provide free transportation for private and parochial school students in public school buses without state authorization.

Planned year-end surplus

THE QUESTION: Can a school board set up the district budget to include a planned end-of-year surplus?

THE FACTS: The school board of a newly-organized central school district (in Fredonia, N. Y.) included an item in its first year budget which set up a *planned surplus* of \$75,000 at the close of the budget year.

It was established by testimony that the proposed surplus had been set up by the board for two reasons:

- To cover salaries, maintenance, supplies, bond payments, etc. for the period July 1 to Sept. 15, 1960 in its second year of operation. This period was just prior to the district's receipt of its first state aid installment.
- To "help stabilize" the district's tax rate for its first (1959-60) and second (1960-61) years.

A district taxpayer brought suit to test the validity of the board's action in adopting a budget including the "planned surplus" item.

Later testimony showed that the questioned procedure was common practice and had been advocated by the state department of education.

THE RULING: The board action was unlawful. The court held it possessed no authority to raise monies for a "planned balance for some later school year. . . ."

In formulating and submitting its budget, the Fredonia board could exercise only such powers—and had only such duties—as were delegated to it by statute.

The court noted that an applicable statute expressly provided: "It shall be the duty of the board of education . . . to present at the annual meeting a detailed statement in writing of the amount of money which will be required for the ensuing year for school purposes." The legislature could hardly have used plainer language, the court held, in requiring a board to confine its budget to school purposes *for the ensuing year*.

The fact that the questioned procedure was common practice, had been advocated by the state department of education, and had been approved by rulings of the state commissioner of education were held by the court "to be plain temporizing with the law . . . and no legal criterion. . . . Expediency does not justify ignoring the law."

Leone v. Hunter et al. In New York Supreme Court; decided Sept. 29, 1959; cited as 191 N. Y. S. 2d 334,—Misc. 2d—.

SIGNIFICANCE: This latter point highlights the view of a highly respected court that state department of education approval of a specific school management procedure does not insure the procedure's legality. This may be particularly so if the matter at issue involves: interpretation of statute; a tax levy; or a grievance of parties not connected with the department. **End**

Selected distributors of paperback books to schools

If you are considering the introduction of a paperback bookstore in your school, your most useful contact will probably be your nearest distributor. Here, for your convenience, is a list of some of the major wholesalers who are interested in working with schools. (A complete list of all wholesalers throughout the country is available for the asking from any paperback publisher.)

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United Book Co.
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Baltimore 23

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outcries from local book and magazine outlets that schools are competing unfairly with them in selling to the public.) In addition, the school has the right to return any unsold volumes for credit toward the purchase of other titles.

What has been gained?

In the words of Mrs. Frances A. Miller, librarian, the Minnetonka paperback program "has met with overwhelming success." But the success she refers to is not the relatively slim dollar profit used to strengthen the library's permanent collection. It is the more important gain to education. Here are some of the results noted in the past half-year:

Several English and social studies teachers in the high school have used more than 600 paperbacks in their classes.

Average-to-top students have been delighted to find a wide range of supplementary reading materials immediately at hand. Many bought books—on their own initiative—to supplement research for term papers, as subjects for book reports, for recreational reading and even as gifts.

Even the below-average ability groups have shown a new interest in reading, stimulated perhaps by the colorful covers and handy portability which make paperbacks less formidable than standard library volumes.

Teachers have, on occasion, brought entire classes to the library to permit them to browse through available books on sale and, together with the librarian, have made suggestions about specific titles of interest.

Book fairs as a start

Some librarians in other districts have voiced the fear that programs such as Minnetonka's would cut down on students' use of regular school library facilities. But, according to Jack Froome, librarian of David Glasgow Farragut—a Chicago high school where a similar program has been underway for some time—the opposite holds true. He has found that the sale of paperbacks in the school library has

actually increased regular book circulation rather than diminished it.

Farragut has been distributing paperbacks for the past five years and in that time has sold more than 13,000 of them. Initially, they were sold through periodical book fairs, held in the library. A local wholesale distributor cooperated by providing thousands of books and hundreds of titles for the day-and-a-half events. They proved immensely popular with the students who responded each time by buying 1,200-1,500 books.

Enthusiasm for the book sales finally proved so great that Froome decided to try to stock paperbacks on a permanent basis. He consulted with teachers and school officials and came up with a nucleus of some 100 titles which included classics, contemporary problems—national and international—and books dealing with the sciences, mathematics and history, as well as some good, general non-fiction.

About 100 titles are always kept on hand, with new ones being added periodically and slow movers dropped. Anyone can make recommendations for new books to be stocked, the only stipulation being that selections be "worthwhile." The final decision about a suggested book rests with Froome.

The Farragut paperback program serves a twofold purpose. It stresses the value and pleasure of acquiring and owning personal libraries. More important, it exists to supplement the efforts of classroom teachers. As a result, paperbacks have been used extensively in the high school's classrooms. Teacher committees make recommendations for classroom reading and these titles are then purchased through the library. In addition, students make purchases on their own to supplement their class work by doing independent reading in their areas of interest.

Objective measures of the advantages of the paperback program are difficult to come by. But Froome is convinced that its success hinges on the desire for good reading developed among students. He is supported in his belief by the project's acceptance and support by the stu-



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dents and the steady sale of paperbacks over a five-year period.

The paperback programs described above are both centered on libraries, but successful "stores" can be located in almost any accessible area of a school. In fact, the point-of-sale in many schools offering paperbacks varies as widely as the immediate benefit claimed for the programs.

At Washington-Lee High School, Arlington County, Va., for example, paperbacks are part of the stock of the school supply shop, run by distributive education students. The shop grosses about \$8,000 annually and, says teacher Boyd Hargraves, paperbacks form a very popular part of the stock. They are displayed on two revolving racks supplied by the local distributor who services the school.

The store is manned by students for six periods during the school day—the only exception is the homeroom period when it is considered desirable to clear the halls. Most of the selections deal with English literature, though some titles are related to early American history and the social sciences, as well as a complete line of Shakespeare and the classics.

Is the program popular with students? Paperback sales have been going on for more than three years now and, says Hargraves, the displays never lack for browsers at any time of the day.

Educational function

At Wakefield High School, also in Arlington County, Principal Harold M. Wilson is pleased with the results of a similar paperback program. Most important, in his view, is the first-hand educational function the paperbacks serve. At very low cost, a student can buy his own personal copy of a book dealing with the subject he is studying. What's more, he can use that book in any way he sees fit, underlining, scribbling in notes and comments, even tearing out whole pages if it suits his purpose—something he cannot do with library or school-loaned texts.

Wakefield's supply of paperbacks are kept on racks and shelves in a school storeroom. Individual teachers, from all departments, handle ordering and general business duties for a year at a time. The high caliber of the school's English de-

partment is responsible for the great number of college level titles kept in stock. Many of these are obtained from the local supplier who handles most of the mass paperback lines. For other, less widely-read titles, the school often orders direct from the publisher.

What do they read?

Suppose you were interested in organizing a paperback program for your own schools. What titles would you stock? This is something that only you, or someone in your school district, can properly determine, for the answer would depend upon a number of factors:

1. The curriculum in a particular school. Supplementary readings suggested by teachers vary from district to district and school to school.
2. The popularity of current movies and television productions, based upon stories drawn from books.
3. The availability of desired titles in paperback format.

A case in point is the paperback program at Newton High School, Newton, Mass. Students have been endorsing the program to the tune of about 40 books purchased each day since last September. The most popular titles right now include: *The Diary of Anne Frank* (a recent film), *The Nun's Story* (also a current movie) and *The Bridge of San Luis Rey* (produced on television a while back).

Also popular, though, are *Of Human Bondage* and many of the classic Greek plays. Mrs. Margaret W. Erskine, school librarian who directs bookstore operations, admits that the demand for Greek drama may be prompted by the recommendations of teachers, but points out that the pattern of book sales reflects something more as well, "not only what is being read in school, but also free taste in reading." (For more information about what books are popular in schools, see publishers' "best seller" lists, pages 40 and 41.)

Determining what titles are available is the easiest task of all. Most publishers will send catalog sheets on request listing their paperback titles. (About 75 publishers now list paperback editions in their offerings, but of these only 15 serve the mass market. Of the 15 mass publishers, about a half-dozen predominate in the school field at the present

time.) One of the best sources of information about available paperbacks, however, is a quarterly catalog,* which provides a complete list of titles currently on hand at all publishers. (A measure of the continuing growth of the paperback field: the catalog listed 6,500 available titles in its spring edition, revised it upward to 9,200 this summer.) The catalog, together with the flyers and bulletins provided by individual publishers, should keep you up-to-date on current titles with a minimum of trouble.

How to begin

Once you know just what books are available, you are ready to organize your program. Here are the factors you should consider carefully before going ahead:

The store. Find a suitable location for your proposed paperback sales. This can be a cupboard in a corridor, a library corner, a foyer, a storeroom—anywhere students can browse at leisure and you can find space to store racks of books.

The titles. Decide who is to select the titles you propose to sell. It can be one person or a committee (in Buffalo, N. Y., selections are made by a high school English teacher, the English supervisor, a librarian and supervisors of art, music, social studies and science). Just remember to keep your choices geared to the needs and desires of your students by soliciting their suggestions and those of teachers and, perhaps, parents as well.

The staff. Financial control of the store and supervision of its operation should be exercised by some responsible member of the school—teacher, librarian, school store manager or some other person you may choose. Actual staffing has been effectively accomplished in most schools by using students to serve as salesmen. These can be volunteers or they can be chosen from members of the honor society, student clubs or individual classes.

The mechanics. Contact a local paperback distributor who can advise you best on how to proceed with ordering, display and sales. In most

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cases he is equipped to provide one- or two-day service on fast-moving titles. In addition, he will probably supply you with display racks and offer useful suggestions on how you can best use display cases, cabinets and shelves of your own. (See box, page 79 for a list of distributors who work with schools.)

The cost. Most paperback programs operate on a self-sustaining basis once initial orders have been placed. Many distributors are willing to help you select titles to fill your initial order. In addition, an educational discount of 20% is generally given to schools.

What about textbooks?

The growing use of paperbacks for supplementary and voluntary reading by students raises the question of paperback textbooks. Why aren't texts being produced in this inexpensive form?

The answer is, they are—and in greater numbers than many school administrators realize. Last year, schools and students in the United States bought nearly \$10 million worth of what, in effect, were paperback textbooks. In grades one through eight, about one-fourth of all textbooks purchased were paperback. Although the high schools haven't gone this far, many now follow the example of college professors who assign paperbacks both as texts and as additional reading.

This use of softback textbooks is entirely in addition to workbooks. Especially during the past decade, consumable paperbound workbooks have been used on a large scale to save teachers' time in preparing—and students' time in copying—a wide variety of problems and practice exercises.

More recently, the text-workbook has become popular. It combines text and practice work in one paperbound book in which the pupil can write for review or reference. Some text-workbooks are accompanied by teachers' manuals which encourage multiple textbook use by including a chart showing page references for each lesson in a dozen or more textbooks.

By 1970, at least 50% of all textbooks will be paperback, according to the president of a leading text-workbook publishing firm. He points out, though, that paperback text materials take various

forms: text-workbooks; paperbound texts with separate workbooks; popular paperbacks, including classics and current books, selected for class study; and sets of pamphlets, each of which covers a single unit of a course of study.

A number of advantages are often cited for paperbound text materials. They are inexpensive, new and up-to-date, lightweight, are personally used by only one student and can be used flexibly according to the progress of the individual.

More to come

The low cost of paperbacks is dependent, of course, on a mass market. As publishers see evidence that a substantial school market exists, more and more educational titles can be expected to become available in paperback form. So far the mass publishers have concentrated upon anthologies, drama selections, novels and non-fiction that have a pretty good chance of being selected as required or supplementary reading by classroom teachers.

The pattern is changing, though. The tremendous potential inherent in the school market has already caused the more prominent mass producers of paperbacks to choose their titles more selectively. Cover designs have come a long way from the lurid and sensational art work associated with most paperbacks a few years back. Some mass publishers are even seriously toying with the idea of gearing future selections more closely to the needs of the school market and, in effect, branching off into educational publishing.

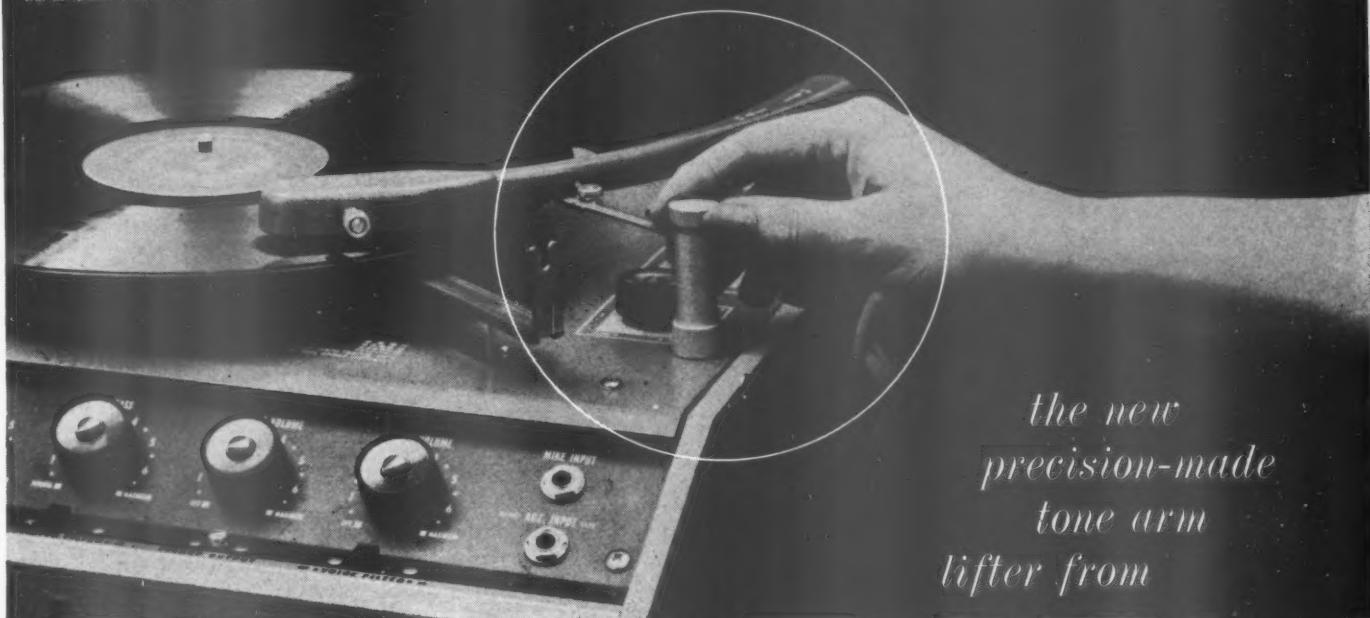
At present, they are restricted in what they can publish because of the demands imposed by the very nature of the mass market. But even here they are taking steps to make their current titles as useful as possible to teachers. One prominent mass house now provides two-page study guides, on request, which the teacher can use in preparing lesson plans and discussions of particular books.

In short, paperback titles which are now more suitable for school use than ever before are sure to be refined even further. More significant, you can begin to use them in your schools right now to supplement your own learning materials at really low cost—and with very little effort.

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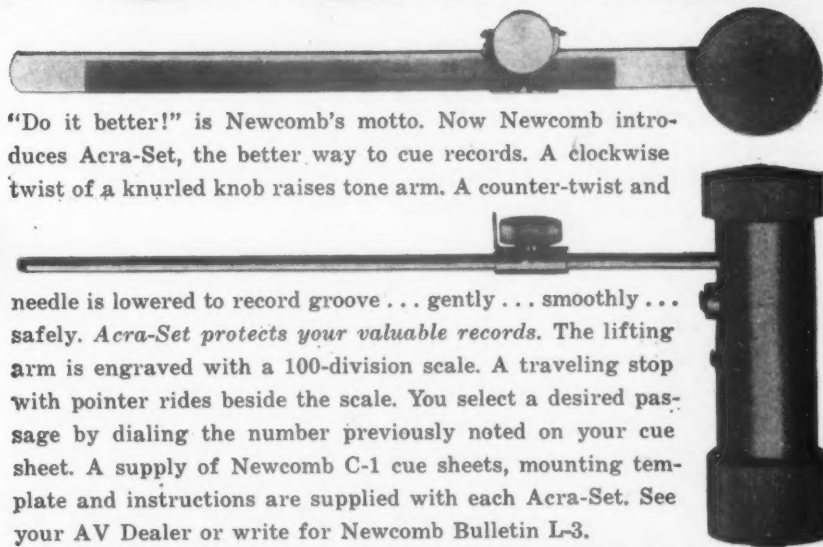
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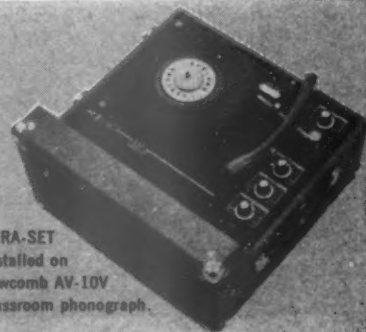
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continued from page 8

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Models for mathematics. A 40-page catalog, illustrating hundreds of three-dimensional clear plastic models for use in the teaching of mathematics, is available from Arthur S. LaPine & Co. The models are grouped in the catalog in separate sections devoted to plane, solid and analytical geometry; curve-drawing appliances; projections, elevations, traces, and intersections; sections and developments of solids; interpenetration of solids; and gears and driving mechanisms.

The transparent models enable students to see external shapes as well as concealed edges, enclosed intersecting planes and internal dimensions. These hidden edges and inter-

secting surfaces are identified through the use of color. Certain of the models are scaled for numerical measurements. Others use a numerical approach to demonstrate the truth of a theorem.

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School record handling. How modern electronic data processing equipment can be used for all student record keeping is described in a brochure from Remington Rand Univac Division of Sperry Rand Corp. It explains the services offered to school administrators through the Univac Service Centers which the company maintains. The brochure describes a basic system consisting of two types of cards: a master name card containing all the constant information about the student and a card form for the subjects requested which is also used for class scheduling.

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All about signal systems. A new 88-page manual from Sperti Faraday, Inc., describes air and electric signal systems and lists specifications of horns, bells, buzzers, chimes and sirens. Included in the manual are sections on gravity drop and lamp-type annunciators and accessory equipment, such as door openers and clocks. Charts and diagrams illustrate how to select the proper type of signal for various background noise levels and work areas.

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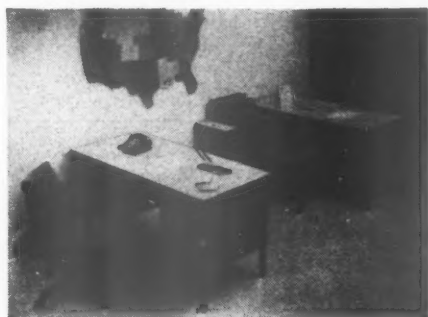
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ference tables. More than 50 different drawers and shelf pedestal variables, in three depths, are provided as well.

The firm's standard color line has been increased to 13 with the new series, including turquoise, teal blue, coral and cherry. Included in the wide range of accessories available are sliding convenience trays for use with box drawers, sliding letter trays, coin and bill tray, recessed dictation shelves, liftout card trays and sets of rubber feet.

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Development of a new kind of electronic teaching aid which allows the teacher to pre-record lessons on small plastic belts and play them back to students through individual listening devices has been announced by Dictaphone Corp. The new system has been tested successfully in actual classroom teaching of subjects ranging from languages and history to shorthand, office machines, physical education and

shop. Tests showed that the electronic classroom multiplied each teacher's teaching capacity. One junior high school teacher of languages reported an approximate doubling of her efficiency.

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Language laboratory

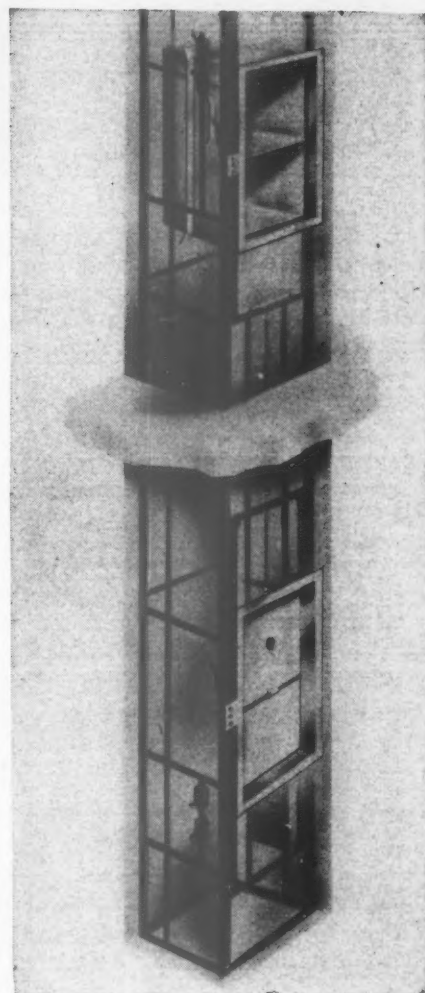
A new audio teaching system, composed of a multi-channel teaching console and a student cubicle arrangement, has been introduced by the Hamilton Mfg. Co. The master console—with accommodations for tape recorders, record players and radio tuners—gives the teacher full view of the room, allowing complete class control. The console's inclined panel enables easy access to switches for communication, monitoring, sectionalizing, and program selection. Capable of expansion to accommodate simultaneous teaching by two instructors, the console features silent monitoring and intercom switch positions.

Student cubicle designs are available in several models to fit varying conditions, such as use in older buildings with untreated ceilings. One cubicle model affords an optional sound damper panel which may be folded down and locked to conceal audio equipment. In this position the panel becomes a plastic covered working surface. A budget model, as well as a deluxe model, is also available.

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A dumbwaiter, especially designed to serve the needs of multi-story school buildings, has been introduced by D. A. Matot, Inc. The car can be provided with any desired arrangement of shelves for lifting books, or carrying food, cafeteria supplies or janitor equipment from floor to floor. Heavy, bulky teaching aids such as movie projectors, phonographs and tape recorders can also be transported.



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A pusher type schoolbus with 61- to 73-passenger capacity has been introduced by the motor truck division of International Harvester Co. The new model, incorporating heavy-duty components throughout, is designed for high mileage or heavy traffic operations. Unhindered front aisle entrance and driver's compartment are safety features of the vehicle and engine; brakes, clutch, transmission and axles all are of ample capacity to move full passenger loads in congested traffic areas.

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A multiple-clip wall board unit for visibly organizing and holding working papers is manufactured by L. D. Klehart Co. The metal boards have a three-quarter inch stainless steel frame and two brackets on the back ready for flush mounting or suspension. They are available in several sizes and styles. The clips will hold a stack of papers three-quarters of an inch thick.

The boards have white plastic holders at column heads for inserting heading cards and plastic windows for title and date-card inserts. Printed headings and clip-titles are supplied. The boards come in two groups, with four sizes in

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Your complete RCA Sound System flashes voice or signal instantly to every corner of your building. Every teacher, every pupil is always within hand's reach. And every day, you broaden curricula a dozen ways through program transmission to any location via the AM-FM radio, record player and tape recorder you may specify as RCA Sound components.

Talk over your requirements with the man who's ready to help you plan, your RCA Engineered Sound Distributor. He'll work out for you a dependable, reasonably priced sound system using RCA's new line of modular equipment. With this flexible new equipment you can order a sound system assembly which meets your needs and budget exactly.

An Educators lease program is available to help acquire this vital equipment. Look up your RCA Engineered Sound Distributor in the classified book under "Public Address and Sound Systems," or write RCA, Dept. K-110, Camden 2, N.J.



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RADIO CORPORATION OF AMERICA

(Circle number 726 for more information)

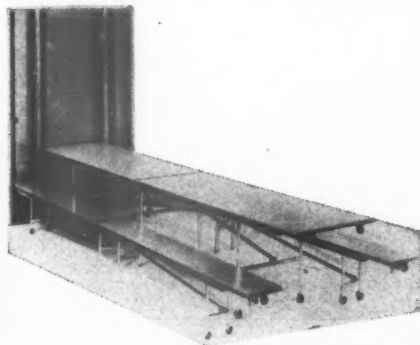
four- and five-foot circumferences, they can be motorized and lighted at additional cost.

For more information, circle number 872 on the Reader Service Card.



Table folds into walls

Tables that will fold into the walls of a multipurpose room have been introduced by the Smith System Manu-



facturing Co. The wall cabinet method makes it possible to set up or clear a cafeteria for other use in a minimum amount of time. To provide maximum flexibility, the company is offering 24 different models and sizes ranging from a 10-foot table that stores in a wall pocket five feet high, to a seven-foot-high wall pocket which holds two 14-foot tables. Both the tables and benches fold into the wall. The wall pockets themselves may be recessed, partially recessed, or attached to the wall surface.

For more information, circle number 830 on the Reader Service Card.



Portable sound-retardant wall

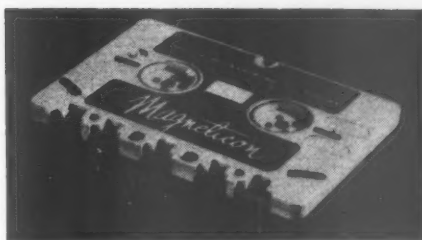
A lightweight, completely portable wall which does not require ceiling or floor tracks has been announced by Airwall, Inc. The walls may be literally moved from room to room and are lightweight enough to be handled by one man. They are "sealed" to the ceiling by an unusual telescoping device which locks the panel rigidly in position. The manufacturer reports that when installed, Airwall provides such a tight seal at the floor and ceiling level that it offers a sound control never before possible with a movable wall.

For more information, circle number 846 on the Reader Service Card.



Language lab tape magazine

Preloaded tape magazines are now offered by Magnetic Recording Industries, Ltd., for use in language lab-



oratories. Threading errors and tape damage are virtually eliminated with the new magazine, which comes complete with 600 feet of tape on integral hubs. It can be used instantly since teacher or student merely slips the magazine into the guide slots. When

the end of the reel is reached, the unit shuts off automatically.

For more information, circle number 832 on the Reader Service Card.



Electric pointer for teachers

A major assist for teachers doing large-group instruction is provided by the unique Ednalite Electric Projection Pointer. With the simple press of a button, the instrument casts a brilliant, sharply defined contrasting arrow image over long projection distances. It is ideal for lecturers using slides or charts—even in a fully

COMFORT AND DURABILITY

THIS IS IT! Here is an average man, an ordinary human being, enjoying comfort. If he were larger, or smaller, he would still be comfortable in a Durham folding chair. These well-built chairs are designed for the comfort of people! We would not presume to read this man's thoughts, but chances are ten to one were we to ask him what make of folding chairs he'd buy, he'd say: "This make!" It's a sure thing he'd be 100% sold when given the complete story of Durham construction and materials. They insure full value for every seating dollar.



Tubular or channel steel frames in many styles: All steel; padded, upholstered seats and backs; wood seats. Tablet armchair with wrap rack. Chair sizes for children under 10. Chair accessories include book racks and kneelers.

Write for catalog. See why your best buy is Durham.



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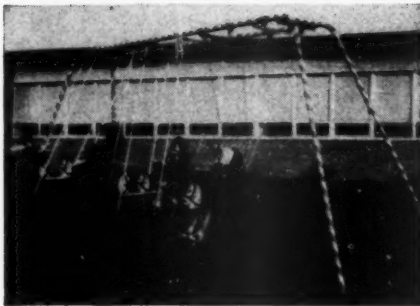
(Circle number 715 for more information)

lighted auditorium. The pointer operates on ordinary 115 volt AC current, comes with 15 feet of detachable cord.

For more information, circle number 885 on the Reader Service Card.

Playground swings

Single-seater hobby horse swings and double-seater glider swings—available with four units-single section, six units-two sections and nine units-three sections—are offered by Game-Time, Inc. The swings feature safer double top rail frames and are finished with eye catching epoxy coatings in



nine colors and five decorative patterns. The swings have a "parallelized" type suspension so riders are always safely level in motion. Seats are con-

toured and construction is all steel except for horse heads which are of durable fiberglass.

For more information, circle number 834 on the Reader Service Card.

Heavy copy paper

A heavy white copy paper for use on any "Thermo-Fax" copying machine has been developed by Minnesota Mining and Mfg. Co. The bondlike paper is designed for prestige copying applications or where a more durable reproduction is needed. Available in 8½ inches by 11 inches, eight inches by 10½ inches and 8½ by 14 inches—as well as special sizes to order—the new product is only slightly higher than regular copy paper.

For more information, circle number 845 on the Reader Service Card.

Nameplate press

A compact machine for stamping individual letters and numbers on all types of identification plates and tags has been announced by Identification Systems Co. Uses of the marking machine include markings on keys, nameplate badges for personnel, storage bin tags and other identification purposes.

For more information, circle number 833 on the Reader Service Card.

Safety patrol helmet

Chamberlain Aviation, Inc., has developed a safety patrol helmet—designed to effectively warn motorists to watch out for children—that combines distinctive, easily identified styling with high-visibility color.

Made of fiberglass-reinforced polyester resin to withstand rough usage, the helmet is available in highway yellow or high-visibility white. Colors



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Visual education, through the use of closed circuit TV, is being adopted rapidly by schools throughout the nation. Philco's broad experience in educational TV is your assurance of obtaining the greatest flexibility and economy. Philco's new all-transistor equipment is your guarantee of maximum reliability, freedom from maintenance and ease of operation. Write today for information and your copy of the Philco Closed Circuit TV Systems Planning Guide.

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Philco Closed Circuit TV Systems permit multi-group instruction, with full audience participation.

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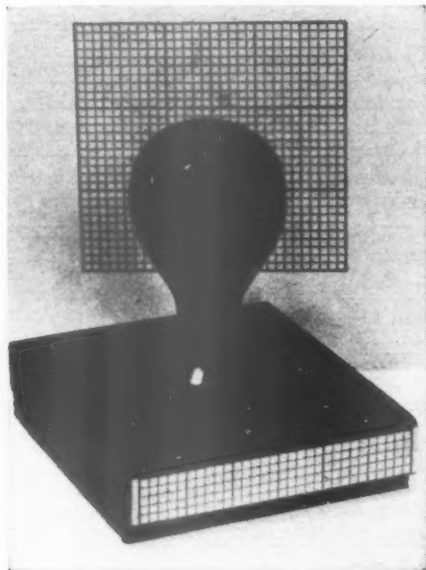
cannot chip, crack or peel off since they are formulated right into the resin. A sanitary, easily-cleaned polyethylene webbing, anchored securely within the helmet, makes it adjustable to fit any head size. The helmet's design permits nesting one within another so that storage space requirements are kept to a minimum.

For more information, circle number 857 on the Reader Service Card.



Graph rubber stamp

Math and science teachers, who use great numbers of graphs in their lessons, can simply stamp graph patterns as needed with the graph rubber stamp offered by Edmund Scientific Co. Graph pattern is three inches square



and includes 100 blocks per square inch.

Instead of attaching separate sheets of graph paper to test papers and lesson sheets, teachers can simply stamp the pattern and avoid problems of losing or mixing separate graph papers.

For more information, circle number 854 on the Reader Service Card.



Astro-domettes for schools

High quality, modestly priced astro-domettes are available to secondary schools from Astro-Dome, Inc. Made of fiberglass, the units are available in eight- 10- and 12-foot outside diameters.

Because sections are stamped or molded, dome components are uniform and interchangeable. One 10-foot dome weighs about 500 pounds.

Each dome is equipped with an "Up



and Over" shutter system and is manually rotated, though electric drives are available if desired.

For more information, circle number 865 on the Reader Service Card.

Portable choral riser

Folding portability is featured in a new series of choral risers just developed by the Sico Manufacturing Co. Like Sico's modular stages, the choral risers can be folded by one person and rolled to a storage area only 16½ inches by 54½ inches. The risers are built to public grandstand safety codes and are backed by a 10-year guarantee.

Available in two- three- or four-rise units, the choral stands have steel frameworks and can be folded or unfolded in seconds without use of latches, locks or levers. Platforms are 96 inches long and 18 inches wide, and are produced in a variety of heights.

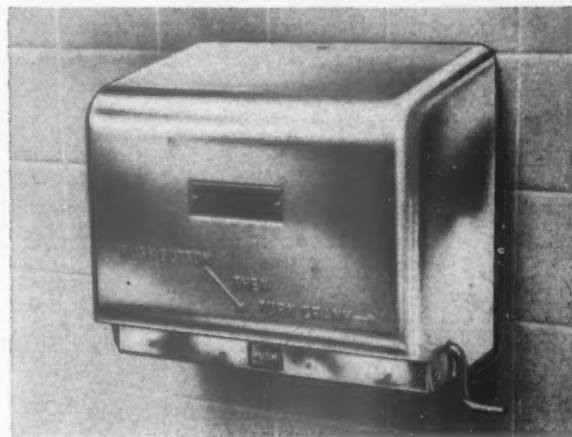
For more information, circle 902 on the Reader Service Card.

NOW - the first polished aluminum towel dispenser

"It'll look
this good
months
from now"



Mosinee Turn-Towl
cabinets are leased
free for use with
Mosinee towels



The new look is polished aluminum — a brand new Turn-Towl cabinet that takes water and wear without showing it. Intensive two-year tests prove:

- Anodized, permanent aluminum finish can't rust, won't wear or chip
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Your nearest Mosinee Turn-Towl distributor has the new aluminum cabinet now. Write for his name.



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Your Position

Address

City Zone State

No. of pupils in district ☐ 300-599; ☐ 600-1,199; ☐ 1,200-2,999;
☐ 3,000-5,999; ☐ 6,000-11,999; ☐ 12,000-24,999; ☐ OVER 25,000

☐ Send School Management for one year at \$8.00
☐ Bill me ☐ Bill my district

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*in the
schools' battle
against
classroom fatigue*



Many school administrators are making bottled carbonated beverages easily available in food and refreshment facilities. In so doing, soft drinks also achieve several benefits:

- Youngsters are encouraged to stay on school property at lunchtime.
- Increased participation is secured in school cafeterias.
- Mild, moderate, wholesome recreational habits are cultivated.

Soft drinks help accomplish these ends in wholesome ways and for wholesome reasons.

Like relishes, soft drinks accent the diet healthfully and visually, thus adding flavor and variety—zest and palatability to routine menus, while aiding digestion and stimulating the appetite. Their 100 calories of food energy in easily assimilable form per 8 ounces of drink—give a fast and effective boost to energy and classroom attentiveness.

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The National Association of the Bottled Soft Drink Industry. A non-profit association of manufacturers of bottled soft drinks, with members in every state. Its purposes: To improve production and distribution methods through education and research . . . and to promote better understanding of the industry and its products.

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